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ABSTRACT

This report summarizes the data from the baseline survey for Project Redirection, a national demonstration aimed at testing a comprehensive service program model for welfare-eligible pregnant teenagers and teen mothers. The baseline survey, the first part of a program impact analysis, provides a highly descriptive profile of the characteristics and needs of the target population served by Project Redirection in four experimental sites across the country and four other sites matched for comparison. Chief among the findings were that: (1) the young women were educationally disadvantaged; (2) their work experience was considerable and they were positively oriented toward work; (3) contraception was neither effectively nor consistently practiced and many continued to expose themselves to repeat pregnancies; (4) community services were used but a number of needs remained unmet; (5) informal supports played an important role, especially with regard to child care and emotional support; (6) most girls came from disadvantaged home backgrounds and most continued to live with their mothers. The report concludes that the long-term prospects of the young women for economic self-sufficiency are not promising and that their trajectories need redirecting. Appended are findings related to the technical aspects of the evaluation; 40 supplementary tables; and a bibliography. (RDN)

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Manpower Demonstration
Research Corporation

Needs And Characteristics Of Pregnant And Parenting Teens

The Baseline Report For Project Redirection

Denise F. Polit
With
Janet R. Kahn
Charles A. Murray
Kevin W. Smith

AMERICAN INSTITUTES FOR RESEARCH
IN THE BEHAVIORAL SCIENCES

May 1982

UD 023948

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The Authors

PREFACE

Project Redirection is a demonstration aimed at testing the value of a new program model of comprehensive services for primarily welfare-eligible pregnant teenagers and teen mothers. Beginning operations in four sites in 1980 as a joint funding effort of the Work Incentive Program (WIN) and the U.S. Department of Labor and the Ford Foundation, the program uses locally-based community organizations to link and coordinate existing services to meet the needs of these young people. Through a process enhanced by the services of volunteering community women, the program encourages the teens to complete their education, to follow up on proper medical care, to take part in some employment-related or job training activity, and to attend other activities, which include family planning and instruction on the use of contraceptives. The long-run, overall aim of Redirection is to help these young people develop economic and personal self-sufficiency.

Project Redirection operates under the oversight of the Manpower Demonstration Research Corporation (MDRC), a nonprofit corporation experienced in the operations and research of demonstration programs designed to aid the economically disadvantaged. MDRC also has responsibility for the research carried out on the program, which includes an impact analysis being conducted by the American Institutes for Research. Additional research studies, conducted by MDRC staff, cover the implementation of the program, its costs, and an ethnography of participating teens to examine the more subjective aspects of the teen motherhood experience.

This is the baseline report for the impact analysis: that is, it is a portrait of the characteristics and attitudes of the young teen mothers or mother-to-be at the point of their entry into either the Redirection program or a comparison group. Both groups of teens will also be interviewed after 12 and 24 months as part of a major survey to examine the effects of the program on these young women's decisions about school, family planning and work.

This baseline report is an important one, not only because it lays the foundation for a comprehensive and rigorous evaluation on a program of services for adolescent parents, but also because it has a contribution to make in its own right. The data it contains on the demographics of these teens, their behavior and attitudes, do much to inform the current policy debate about adolescent sexual activity, pregnancy among teenagers, and childbearing -- a debate replete with speculation and half-truths.

This report reveals these young people to be a multi-problem group, with severe economic, educational and social deficits. Their problems are of a magnitude which far exceeds their ability to deal with them. Moreover, this segment of the teenage population is the one most at risk for the future; they are 17 years or younger in age, welfare-dependent, and out of the mainstream in terms of education and the labor force. At their point of enrollment in Redirection, over half of the teens were not enrolled in a school at the time of the interview, and a sizeable proportion (36 percent) had not been in school for more than a year.

On a more optimistic side, the teens in this report express a strong interest in pursuing educational and vocational goals. These aspirations seem better developed, however, in terms of work than education, perhaps through a recognition of their need to be able to support themselves and their children. Many of them have had part-time jobs in the past and have found these to be rewarding experiences, while their school situations have often resulted in frustration, failure, and in many instances, a decision to leave school even prior to pregnancy. It would appear that the opportunity to hold a job -- or at least to acquire employment-related behaviors and skills in conjuction with education -- would be particularly significant for members of this target population.

Overall, the baseline information in this report, by showing the current life condition and the interests of this group, suggests that the services offered in Project Redirection are highly compatible with the patterns of needs for services reported by this sample. How well Redirection supplies these services -- and the impacts or effects of the program on the participants' subsequent behavior -- will be the subject of future reports.

Judith Gueron
Acting President
MDRC

EXECUTIVE SUMMARY

Project Redirection is a national demonstration program aimed at testing a program model to serve primarily welfare-eligible pregnant teenagers and teen mothers. Through the provision of a comprehensive range of community services, the program aims to help these young people develop, in the long run, economic and personal self-sufficiency.

The success of the demonstration model will be examined from several perspectives, among them an impact analysis, being performed by the American Institutes for Research. This report summarizes the data from the baseline survey, and thereby focuses on the characteristics of a large sample of disadvantaged pregnant girls and young mothers. While providing the descriptive data -- much of which adds to the limited knowledge we have on the problems of teenage pregnancy -- the report also examines the teens' needs for the program services as provided by the Redirection model.

The Program

Project Redirection is a comprehensive program designed to provide, or broker, a wide range of services to teenage women who are pregnant or have children. To be eligible for the program, a young woman must be 17 years or younger, not yet have a high school diploma, and be receiving (or eligible to receive) Aid to Families with Dependent Children (AFDC). The program has been implemented as a demonstration in five sites across the country -- Boston, Massachusetts; New York City (Harlem), New York; Detroit, Michigan; Phoenix, Arizona; and Riverside, California -- under the management of Manpower Demonstration Research Corporation.[1] It is designed to link participants to a variety of services in order to promote their continued schooling, the development of employment-related skills, the avoidance of an early repeat pregnancy, improved health care, and the acquisition of life-management skills.

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[1] Detroit was dropped from the National demonstration in the fall of 1981 because of management difficulties.

Impact Analysis Design

The impact analysis sample consists of 250 program participants from four sites,[2] and 264 teens meeting program eligibility criteria from four matched sites. The comparison sites were matched to the experimental sites on the basis of socio-demographic characteristics (such as ethnic composition, geographic location, and income distribution) and patterns of service delivery to the target population. The matched sites are: Boston-Hartford; Harlem--Bedford Stuyvesant, New York; Detroit (East Side)--Detroit (West Side); Phoenix--San Antonio; and Riverside--Fresno, California. Teens in the comparison sites were recruited in a manner similar to program participants; that is, through referrals from various community service agencies and by word-of-mouth.

The research design calls for the collection of data both before the teens are exposed to the program treatment and subsequent to it. Thus, each subject was administered a baseline interview during the fall and winter of 1980/1981, the period during which program operations were getting underway. Project Redirection participants were then interviewed shortly after enrolling in the program and comparison respondents were interviewed as soon as it could be scheduled. Follow-up interviews are scheduled to be administered approximately 10 to 12 months following the baseline interviews.

The Research Sample

A total of 514 respondents (excluding the California sample) were interviewed at baseline. The majority of teens were either black (65.8 percent) or Hispanic (31.5 percent). The Hispanic teens were primarily Puerto Ricans from the Boston and Hartford sites (13.6 percent) or Chicanas from the Phoenix and San Antonio sites (17.5 percent).

The teens ranged in age from 11 to 18 years. The mean age of the sample was 15.9, the majority of teens being either 16 or 17. The Hispanic teens tended to be younger than other respondents. The sample was fairly evenly divided in terms of parenting status: approximately half (49.8 percent) were pregnant teens who had not delivered a child, while the remaining half were already mothers. Only 7.4 percent of the teens had ever been married.

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[2] The Riverside program began operations late, and therefore data from that site are not included in this report. Data from Detroit are, however, used in this analysis.

Findings Related to the Redirection Rationale

The data gathered during the baseline survey provided a highly descriptive profile[3] of the characteristics and needs of the target population served by Project Redirection. The major highlights of that profile are summarized below:

Educational Factors

The young women in the sample reflected the kind of educational disadvantages that are frequently reported in connection with the teenage parent population. The findings with regard to educational background, status, and aspiration include the following:

- Almost half of the sample (44 percent) were not enrolled in a school or GED program at the time of the interview. Most of the dropouts (87 percent) said they planned to return to school within 1 to 2 months; however, a sizeable proportion (39 percent) had not been in school for more than a year. Pregnancy and caring for the infant were the most commonly cited reasons for leaving school, but over one-fourth of the girls had dropped out prior to their pregnancies.
- Even among the teens enrolled in school, there was evidence of a considerable number of educational deficits. Approximately 80 percent were a year behind grade for their age, and 40 percent were 2 years or more behind.
- Among those girls in school, about one-third were enrolled in a special school program for pregnant teens or teen mothers.
- The majority of respondents, when asked how far they wanted to continue their schooling, aspired to at least a high school diploma or GED certificate (98 percent). Over 20 percent wanted a college degree or higher.

Employment-Related Factors

Given the youth of these respondents, their work experience is considerable. Various findings indicate a positive orientation toward the world of work:

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[3] For this report, the data from both experimental and comparison sites were aggregated to yield a profile of the entire sample.

- Only a minority of teens (7.4 percent) were working at the time of the interview, and most of them had part-time jobs. However, 70 percent of the girls had worked for pay at some time prior to the interview (60 percent when babysitting and household work are excluded).

- Most of the teens had had some employeemnt-related training or instruction, such as how to fill out a job application (58 percent) or how to act on a job interview (49 percent). However, only a minority reported having received training on how to find a job (33 percent) or training for specific skills (29 percent).

- When asked what they thought they would be doing in five years, 73 percent of the girls said they would be working; an additional 17 percent said they would still be in school. Nearly half of the sample (47 percent) mentioned some specific occupation that they thought they would be pursuing.

- The vast majority of teens (92 percent) said they would rather work than be on welfare. Reasons cited for this preference included the ability to make more money (27 percent), a preference for being independent (18 percent), and a feeling that welfare is for lazy people (10 percent).

Fertility and Contraception

The contraceptive practices of this sample, in general, were neither effective nor consistent. Many had exposed themselves, and were continuing to expose themselves, to repeat pregnancies:

- Approximately one-fourth of the sample (24 percent) had been pregnant more than once. However, only 10 percent either had two or more children or were mothers expecting a higher-order birth.

- Only half of the sample (54 percent) said that they (or their partners) had used some form of contraception at least once. However, among the non-pregnant, sexually active teens in the sample (i.e., those exposed to a pregnancy risk), 80 percent reported having contraceptive protection. Nevertheless, even among those who were practicing birth control, 40 percent admitted they did not use it all of the time.

- There was little experimentation with different forms of birth control. Among those girls who had used some form of birth control, fewer than half had tried more than one method. The most commonly mentioned form of birth control for this sample was the pill (41 percent), followed by condoms (13 percent).

- Those girls who had never used any form of birth control offered a variety of explanations. Among the most commonly cited reasons were concern about side effects (17 percent), a desire to get pregnant (11 percent), and ignorance about birth control (6 percent).

- When asked about access to birth control, the vast majority of teens indicated that one or more forms of contraception were available to them. Only 1.4 percent of the teens said that it would be impossible to get any form of birth control.

Services and Supports

The respondents used a range of services in their communities, but also identified a number of unmet needs. Informal supports played an important role in these young women's lives, especially with regard to child care and emotional support:

- Virtually all teens had received some formal services in the 3-month period prior to the interview. The most frequently cited services they had used were medical care for the baby (78 percent) and self (73 percent): the WIC program (a food supplement program: 62 percent); and food stamps (51 percent).
- The services for which respondents expressed the greatest unmet need were job training (67 percent), job counseling (59 percent), assistance in obtaining infant goods (49 percent), tutoring for school work (45 percent), and educational counseling (42 percent).
- The majority of pregnant girls (73 percent) had received medical care during their first trimester, and most (67 percent) had seen a physician five or more times during their pregnancies.
- The majority of teens depended on family members for child care. The teens' own mothers were the most frequently cited source of child care assistance.
- Most teens reported having a fairly solid network of informal social supports available to them. When asked whom they could turn to when they wanted to "talk things through," their mothers were most frequently cited (61 percent), followed by boyfriends (55 percent) and sisters (38 percent). Most respondents felt they had two to four sources of support. The majority of teens (62 percent) reported having a close friend who was either pregnant or already a mother.
- Nearly three-fourths (71 percent) of the teens said they continued to see the baby's father, often on a daily basis. Among women with babies, the fathers were typically in contact with their children several times a week or more. The fathers' average age was 20.8. About one-third (35 percent) of these men were working, and another 25 percent were still in school.

Home Environment

Most of the girls came from home backgrounds that many would view as disadvantaged. Most respondents continued to live with their mothers, who provided assistance during their young parenthood:

- The majority of respondents (68 percent) had grown up in a household headed up by the mother. Fewer than 20 percent had been raised in a family with both parents present. Respondents had, on average, 5.2 siblings.

- At the time of the interview, most teens were still living at home: a full 72 percent said they were living in a household that included the mother. Only a handful of respondents were living alone or with their child only (2 percent). On average, a total of 5.6 persons were living in the respondents' households at the time of the interview.

- The respondents' families typically had modest educational attainments and multiple instances of teenage pregnancy. Fewer than half of the girls reported that their mothers (33 percent) or fathers (24 percent) had completed high school or a GED program. About three out of every four girls said that their mothers had been teenage parents; among those respondents whose sisters had children, 90 percent had become an aunt while the sisters were still in their teens.

- The most commonly cited sources of economic support were AFDC, food stamps and WIC. The majority of respondents (67 percent) said that their monthly household income from all sources was under $600.

Based on this profile, it is clear that these teens represent a target of concern for social intervention. These young women are disadvantaged economically and educationally; many are at risk to an early repeat pregnancy; and many have not used the services that they feel are needed. Their long-term prospects for economic self-sufficiency do not seem promising. The trajectories that they are on appear to need "redirecting."

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NEEDS AND CHARACTERISTICS OF PREGNANT AND PARENTING TEENS

THE BASELINE REPORT FOR PROJECT REDIRECTION

CHAPTER I
Introduction

Project Redirection is a national demonstration of a program model for services for low-income teenage mothers and pregnant teens. The design and implementation of this program were in response to growing social concern about the costs--individual and societal--of teenage parenthood. The program represents an effort to redirect the lives of young women whose "life script," without intervention, might involve early repeat pregnancies, curtailed education, limited employment options, and welfare dependency.

The success of Project Redirection is being examined from several perspectives. The American Institutes for Research is performing the impact analysis portion of the evaluation. The impact analysis focuses on the extent to which participation in the program results in favorable outcomes to the teenage girls. This report presents the data from the baseline survey.

A. Background of the Problem

Teenage parenthood is by no means a new social phenomenon. Historically, women have tended to begin their childbearing during their teens and early twenties. In fact, even during the past two decades the teenage birth rate has declined. In the late 1950s, 90 out of 1000 women under 20 gave birth as compared with 52 out of 1000 in 1978 (Women's Bureau, 1979; Alan Guttmacher Institute (AGI), 1981). Several factors contribute to the current attention focused on teenage pregnancy and parenthood. First, there is currently a large number of young women in the 13 to 19 age range, so that while the birth rates are declining, the absolute number of involved teenagers is increasing. Second, the declining birth rate is not consistent for all teenagers: among those young women aged 14 or younger, the birth rate is increasing. Third, these trends are occurring at a time when contraceptives are increasingly available to teenagers as a means of avoiding unwanted pregnancy. Fourth, the evidence documenting the unfavorable consequences of teenage parenthood has continued to mount.[1] Finally, there is an unmistakable and dramatic trend away from teenagers giving their children up for adoption. Thus, the magnitude of the problem, together with its perceived costs and avoidability, have combined to make teenage pregnancy and parenthood a national social issue.

According to figures released in 1978, approximately 1.1 million American teenagers aged 15 to 19 give birth, obtain abortions, or have a miscarriage or stillbirth each year.[2] This represents nearly 10 percent of the teenage women in this age group. An additional 30,000 girls under the age of 15 become pregnant each year (National Center for Health Statistics (NCHS), 1976; 1978). Two-thirds of the pregnancies to 15- to 19-year-olds result in live births, and of these 600,000 births, 21 percent are out of wedlock (NCHS, 1976, 1978). Looked at from the point of view of the larger society, approximately one out of every five babies born in the United States is born to a teenage mother. It has been estimated that, if current rates prevail, about 4 out of 10 of today's 14 year old girls will have experienced at least one pregnancy before they reach 20, and 1 in 5 will have had one or more pregnancies by age 18 (Tietze, 1978).

During the 1960's and 1970's programs serving the various needs of teenage parents developed throughout the nation. Most of these programs have a specific focus, such as the provision of prenatal or postnatal medical care. Information on the number of such programs, their client load, and the services they provide is only now being gathered and analyzed. Even in the absence of concrete figures, it is clear that a substantial number of resources for this group does exist. For example,

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[1] The consequences of early childbearing are discussed in detail in Chapter III.

[2] The U.S. has a higher rate of teenage childbirth than any other developed country: in the mid 1970s, the U.S. rate was 52 per 1000 teens, compared with 3 per 1000 in Japan, 23 per 1000 in France, and 32 per 1000 in the United Kingdom (AGI, 1981).

AIR's 1978 study of service provision to this target group in Boston revealed that over 50 agencies were providing a variety of services relating to teenage pregnancy and parenting. (Cannon-Bonventre and Kahn, 1979).

Despite the fact that there is considerable social intervention on behalf of the teen parent population, there seems to be a general consensus that current programs and services are inadequate--not necessarily because there are not enough of them, but because those that exist do not deliver a full range of needed services to the majority of teenagers in need. In some communities there is overlap and duplication among service providers (and perhaps even competition for clients), while in others few or no services are available. Scarcity of services is particularly apparent in rural and suburban areas. NACSAP, which conducted a survey of 50 agencies in 1977, found that "the pattern of services is at best a 'patchwork quilt' with very few comprehensive programs in place largely because essential services are either not available or are virtually inaccessible to those in need" (Forbush, 1978, p.92) Thus, in 1981, the biggest unmet need for services to teen parents appeared to be programs that offer comprehensive services to teens during pregnancy and early parenthood.

B. Overview of Project Redirection

Project Redirection is a national demonstration of a particular model of service delivery for teenage women who are pregnant or already have children. It is a comprehensive program that is designed to provide for a wide range of client needs. Project Redirection serves a well-defined population of teenagers. To be eligible for enrollment, a young woman must be:

- 17 years old or younger;
- pregnant or a mother;
- receiving welfare on her own grant or a member of a family receiving welfare; and
- without a high school diploma or a GED certificate.

In addition to these basic criteria, each of the agencies operating a program under Project Redirection has specific geographic residency requirements.

Project Redirection as a service model is being operated as a pilot program in four cities under the management of Manpower Demonstration Research Corporation (MDRC). The program is jointly funded by the U.S. Department of Labor, WIN, and the Ford Foundation. In New York City, the program is offered to residents of Central Harlem by the Harlem YMCA. In Boston, the program is conducted by El Centro del Cardenal, or Cardinal Cushing Center for the Spanish-speaking. Founded in 1958 by the Catholic church, this organization is a multi-service center serving the Hispanic, largely Puerto Rican, population of Boston. The two western sites of Project Redirection are Phoenix and Riverside, California. In Phoenix it is operated by Chicanos Por La Causa, a primarily Chicano community development corporation. The target area for the program is South Phoenix. The Children's Home Society is the agency offering this program to the residents of Riverside and its environs.

At the time the data were collected for this report a Detroit Project Redirection program was also underway, where it was operated by the Detroit Urban League. Because of management difficulties, Detroit was dropped from the national Project Redirection demonstration in the fall of 1981, but information on its enrolled teens is included in this report. The Riverside program, on the other hand, had started operations only a short while prior to the collection of these data, so data from that site are not used in this report.

As defined by MDRC, the goal of Project Redirection is to provide the clients "with a program of services and activities in support of continued schooling, the development of marketable skills, acceptance and use of needed health care and social services, and planning for eventual employment and self-sufficiency." Although there is some flexibility to the Project Redirection guidelines to allow for the differences among the sponsoring agencies, there are clear requirements about basic project components needed to meet this goal.

Two of these components distinguish Project Redirection from other comprehensive programs that exist for teenage mothers and mothers-to-be. One of these is the utilization of community women as primary supports to the clients. Upon enrollment, each participant is assigned to a community woman, with whom she is to meet on a weekly basis throughout her term in the program. Drawn from the local community, these women are available to their clents, and where appropriate, the client's family, to help each girl clarify and move toward her individual goals. Community women and participants take part in a range of activities from talking, to shopping, to visiting schools or clinics together. The community woman's role lies somewhere between surrogate mother and para-professional caseworker. The expectation is that the individual attention will increase the program's success in retaining participants and helping them define and meet their needs.

The second special feature of Project Redirection is a link with the local Work Incentive Program (WIN). In several cities, WIN has stationed a local SAU worker at the Redirection site. The overall goal of the WIN program is to help welfare recipients become employed. Given the age of Redirection participants, promoting ultimate employability rather than immediate employment is the major task.

The linkage with WIN and the use of community women are two features of Redirection that augment the comprehensiveness of the program. The service components of Project Redirection include:

- a variety of options for continued schooling;
- employability services to introduce participants to the range of possible vocations, aid them in the development of marketable skills, and prepare them to find and retain appropriate jobs;
- links to all necessary forms of health care;
- education in early childhood development parenting skills;
- birth control and family planning counseling;
- individual counseling;

- life management skills such as nutrition education, basic budgeting, etc; and
- group recreational activities, including some designed to involve other members of the family.

Although all these components are offered, there is no Redirection standard for how much time a teen must spend in each component. Each participant, working with her counselor and community woman, develops an Individual Participation Plan (IPP). This IPP outlines her plans for schooling and child care, how and when she will utilize particular service components, and social activities designed to increase her attachment to and use of Project Redirection as a whole.

In summary, Project Redirection is a comprehensive service program for young welfare-dependent teenage mothers, generally designed to prepare the participants for eventual economic self-sufficiency. The program introduces two distinctive features, community women and a WIN linkage. The program is being piloted in four sites across the country.

C. The Impact Analysis of Project Redirection

The overall goal of the impact analysis is to determine whether participation in Project Redirection results in favorable outcomes for teen mothers. The general hypothesis to be tested may be expressed as follows:

> Pregnant girls and teenage mothers who participate in the Project Redirection programs will experience better educational, employment-related, health and contraceptive outcomes than those who do not participate.

This hypothesis will be tested by means of a research design and analytic strategy that are described in Chapter II. However, it must be recognized at the outset that barriers to demonstrating impact are likely to emerge. One such barrier is the possibility that selection bias could distort the findings, as discussed at length in the second chapter. But methodological rigor is not the only difficulty. The fact is that the program will, at the point when impact is assessed, be a relatively young endeavor. This means that not only will exposure to the program be relatively brief, but also that the program will probably just be overcoming the start-up difficulties that typically develop in new social interventions. The impact analysis would, therefore, be doing a disservice to a potentially promising approach by focusing exclusively on aggregated outcomes without also examining some program elements or client subgroups for evidence of success. Thus, the analyses will also explore factors contributing to successful (or unsuccessful) program operation.

Because the range of behaviors, values, attitudes and characteristics that are of interest in a broad social program such as Project Redirection is vast, it is conceptually and analytically useful to put the issues raised by the program into a broader context. The conceptual framework that AIR has found generally useful in analyzing the problems of disadvantaged populations is based upon the construct of "investment." Investments are behaviors that represent an expenditure of time, money, energy or other resources that is motivated by the prospects of larger returns sometime in the future.[3]

The key elements of an investment are that it is voluntary, it is future-oriented, and the anticipated return is in the form of some profit or pay-off. Behaviors that are mandated do not constitute personal investments. A person must choose to "risk" resources in order for a true investment to occur. The future orientation is critical because the outcomes of investing may not manifest themselves for months, or even years. Thus, investment requires willingness to defer gratification. Finally, an investment connotes the expectation that there will be a profit or return at some point in the future.

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[3] Our investment construct is similar to the one used in economic models of human capital accumulation. The AIR construct is somewhat broader in that it is less specifically focused on direct monetary returns. In both cases, going to school and getting on-the-job training are investments. But the AIR notion of personal investment includes activities such as acquiring practical skills to limit one's dependence on mechanics or plumbers; it includes participation in a neighborhood action group that is trying to improve the amenities that the environment affords. In the present study, it includes spending energy and money on contraceptives to avoid an early repeat pregnancy.

Project Redirection, in a broad sense, is designed to get teenage mothers to make investments in themselves. Virtually all of the program's objectives can be interpreted either as promoting personal investments, promoting conditions that facilitate investments, or removing barriers to making them. The impact analysis will examine the extent to which the programs have been successful in attaining this goal.

The impact analysis is built upon a framework that assumes that (a) the long-range outcomes of the program (i.e., the "pay-offs" from investments) are going to be achieved in a sequential series of steps spanning a considerable period of time; and (b) the appropriate measures of success focus on whether the program is affecting the early outcomes. Under these assumptions, it can be inferred that a successful program would set in motion a sequence of events or conditions whereby the program would:

- provide the services that the program was set up to provide, and thereby
- affect values, knowledge, aspirations and motivations, and in so doing, (under appropriate circumstances)
- produce investment behaviors that lead to the desired long-run economic returns and personal satisfaction outcomes.

Ultimately, after the second wave of data collection, the impact analysis will assess the extent to which the program has made accomplishments in the first two categories, and, to a more modest extent, in the third one. At the present time we only have baseline (pre-treatment) data. Nevertheless, we can begin to use our conceptual framework to get a profile of where these girls stand now with respect to the desired outcomes. More specifically, we can use the first-wave data to answer such questions as the following:

- Are these young mothers making investments in themselves now? Do these teens represent a population that needs to be "redirected" into making personal investments?
- What kind of resources do these girls bring with them in terms of knowledge and motivation?
- To what extent do teens currently utilize the services they need?

- To what extent are these girls handicapped (or supported) in relation to their investment capacities by their home environment?

We have defined three categories of variables to be examined in this report: investment behaviors, enabling factors, and incoming assets. In the category of investment behaviors we have included measures of educational progress; job experience variables; and avoidance of repeat pregnancies (including contraceptive utilization). Enabling factors, which we view as intermediary outcomes upon which the program can impact, include the following: measures of job readiness, goals and aspirations; knowledge of and access to birth control; psychological factors; service utilization patterns; and health status. The third category, incoming assets or liabilities includes characteristics that the program presumably cannot affect directly but which, nevertheless, could constrain or facilitate investments. This category includes home environment variables; support network conditions; and economic status.

D. The Interim Report

As indicated above, the purpose of this report is to summarize the findings obtained in baseline interviews with a sample of Project Redirection participants and a sample of comparison subjects. The research design for the overall impact analysis is described in the next chapter.

The third chapter examines the data from the baseline survey from a substantive point of view. That is, the data are analyzed so as to shed light on pre-program investment behaviors, enabling factors, and incoming assets (see section C above). Except in the introduction to Chapter III, which describes the basic demographic characterisics of the sample, the data are aggregated across sites and across experimental and comparison groups. Our purpose here is to provide some answers to the questions posed above for the group as a whole, in order to look at the fit between the program's objectives and the need for the program's service in the population at hand. In other words, we are examining here the basis for the Project Redirection rationale.

The final chapter of this report summarizes the findings and discusses their implications. Particular attention is paid to the nature of the service needs of this population and relevant program emphases.

Both group and site differences are explored in the technical appendix, Appendix A. The primary focus of this appendix is methodological. Patterns of group and site differences are examined to address such issues as the magnitude of pre-treatment group differences and problems posed by such differences; the adequacy of the site-matching strategy; and the appropriateness of aggregating across sites. Appendix B includes supplementary tables.

CHAPTER II

Impact Analysis Research Design

A. Overview

The design used to assess the impact of Project Redirection is a pretest/posttest quasi-experimental design with a nonequivalent (i.e., nonrandomly assigned) comparison group. The possibility of implementing an experimental design was investigated prior to the collection of data. For various reasons, randomization was viewed as unfeasible in all of the sites. The enrollment numbers during the first 6 months of program operation indicate that the design decision was appropriate: the low number of recruits has made it impossible for programs to meet their initial quotas and random assignment of recruits to a no-treatment status would have lowered enrollments even further.

Data were collected from a sample of participants in the five Redirection sites (Boston, New York, Detroit East, Phoenix and Riverside) and from teens meeting the Redirection eligibility criteria and living in communities matched to the program sites (Hartford, Bedford-Stuyvesant-Brooklyn, Detroit West, San Antonio and Fresno). Each subject was administered a baseline interview during the fall and winter of 1980/1981. Redirection participants were interviewed shortly after enrolling in the program, within the first 45 days if possible.[4] Comparison respondents were interviewed as soon as an interview could be scheduled. Comparison respondents were referred to us by various social service agencies that had agreed to cooperate with us in this study.

The research design calls for two follow-up interviews, scheduled 12 and 24 months following the baseline interview. The first follow-up interviews began in early fall of 1981. This volume reports on the first wave of data collection, although methodological issues regarding the overall evaluation are reviewed.

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[4] The mean number of days between enrollment and the interview was 64.2. The goal of administering the baseline interview within the first 45 days of enrollment was not always met, due to a number of factors. The effects of the delayed interviews on the impact analysis are discussed in Appendix A.

The sample for the impact analysis consists of 250 participants and 264 comparison subjects.[5] Table 2.1 shows the distribution of respondents by site. The demographic characteristics of the sample are described in Chapter III.

The interviews were designed to gather baseline information about the respondents' living situation, education, employment, pregnancy and parenting experience, contraception, aspirations, supports, and service utilization. The majority of respondents were interviewed either in their own homes or in the agencies that served them. The baseline interviews required approximately 60-90 minutes to administer.

B. Special Design Issues Relating to Selection Bias

In quasi-experimental designs with nonrandomized treatment and comparison groups like that of Project Redirection, attempts to assess the impact of a treatment program are often complicated by pre-existing differences between the groups to be compared. Any initial nonequivalence between groups resulting from the uncontrolled, nonrandom manner in which subjects are assigned to groups may result in selection bias. Specifically, selection bias refers to the difference in the mean outcome scores for the treatment and comparison groups that would have been observed in the absence of the treatment intervention. Since treatment effect estimates reflect both the impact of the program and selection bias, this bias will distort assessments of the true effect of a treatment program. If subjects in the treatment group would have achieved more favorable outcomes than those in the comparison group without the benefit of treatment, then a

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[5] The final sample differs somewhat from the original sampling design due to difficulties in recruiting the called-for number of participants in Boston and New York by February 28. The Riverside site was added to the program late, and therefore data from that site are not included in this report.

TABLE 2.1

SAMPLE FOR IMPACT ANALYSIS AT BASELINE

Experimental Sites	Number in Sample	Corresponding Comparison Site	Number in Sample
Boston	36	Hartford	35
Harlem	56	Bedford-Stuyvesant	62
Detroit East	69	Detroit West	78
Phoenix	89	San Antonio	89
Total in Experimental Sites	250	Total in Comparison Sites	264

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

positive selection bias will be present, making the program appear more effective than it really is. If, on the other hand, the mean outcome for the comparison group would have been more favorable if treatment was withheld from members of the treatment group, a negative selection bias will arise, making the program appear less effective than it really is.

Because we do not know the outcomes that would have occurred for experimental group members if the treatment had been withheld, the degree of selection bias present in a given evaluation cannot be reliably determined. However, there are two ways to minimize the threat of selection bias: by design and by statistical control.

When subjects cannot be randomly assigned to groups, the potential for selection bias can be greatly diminished by deliberately forming treatment and comparison groups that are as similar as possible. In designing Project Redirection, several strategies for minimizing group differences were adopted, and plans for introducing analytic controls have been developed. These procedures are described below.

1. Comparison Site Selection

The similarity of the experimental and comparison groups is dependent, at least in part, on the similarity of the environments from which the subjects are drawn and the opportunities those environments afford the target population. Therefore, in selecting the comparison sites, attention was paid to matching key characteristics of the experimental and comparison sites.

Ideally, comparison subjects would have been selected from the same community as the program participants. This strategy would clearly maximize similarities in terms of local policies, services, employment opportunities, costs of living, racial/ethnic attitudes, racial composition, and so on. On the other hand, this approach could introduce serious bias since non-participating teens would most likely have selected themselves out of the program, and might differ substantially from participants in terms of, say, motivation or need for external assistance.

The strategy adopted, therefore, was to select as a comparison site a neighboring community, or, if this was inappropriate or unfeasible, a community in a different locale whose characteristics could be matched to important characteristics of the Redirection community. In all cases, however, geographic similarity/proximity was used as the first screen in identifying potential comparison sites. Beyond geographic locale, three sets of criteria were considered in selecting comparison sites: (1) sociodemographic composition of the population; (2) availability of sufficient numbers of eligible subjects; and (3) pattern of service delivery to the target population.

With respect to sociodemographic characteristics, potential comparison sites were matched to each experimental site in terms of the following: total population size, population density, ethnic composition, median per capita income, percent below poverty level, and percent receiving AFDC. The most important factors were those directly related to program characteristics, namely ethnicity and socioeconomic variables. Because the Redirection programs are situated in communities serving clearly identified ethnic groups (blacks in Harlem and Detroit, Hispanics in Boston, Hispanics and blacks in Phoenix, and whites in Riverside), comparison sites were needed with an ethnic composition similar to that in the program sites. Similarly, since the eligibility criteria for the program include receipt of AFDC (or low family income), it was necessary to select comparison sites that were not predominantly affluent or middle class. After matching for these characteristics, other sociodemographic characteristics of the sites were used to further improve the match. A summary of the sociodemographic characteristics for the pairs of matched sites is presented in Table 2.2.

The second important criterion in selecting a comparison site was the availability of sufficient numbers of eligible teens. Birth data for teenagers were obtained (by race and age where possible) for sites that were considered an appropriate match based on the sociodemographic criteria. A formula was used to project the size of the eligible pool of teens (including both pregnant teens and teen parents). Comparison communities were selected only if their estimated pools were at least as

TABLE 2.2

SUMMARY OF SELECTED SOCIODEMOGRAPHIC CHARACTERISTICS OF MATCHED EXPERIMENTAL AND COMPARISON SITES

Selected Characteristic	Matched Experimental Comparison Sites									
	Boston	Hartford	Harlem	Bedford Stuy-vesant	Detroit East	Detroit West	Phoenix	San Antonio	Riverside	Fresno
Total Population[a]	636,725[1]	138,152[1]	159,267[2]	155,125[2]	NAV[e]	NAV	664,721[1]	773,248[1]	150,612[1]	176,528[1]
Density per Square Mile[b]	13,842[1]	8,223[1]	NAV	NAV	NAV	NAV	2,467[1]	2,935[1]	2,112[1]	3,293[1]
Percent Black[a]	NAP[f]	NAP	94.6	79.5	59.5	58.0	4.7	7.1	5.2	9.5
Percent Hispanic	2.8[1]	7.6[1]	NAP	NAP	NAP	NAP	14.0[1]	52.2[1]	12.7[1]	18.0[1]
Percent White[a]	NAP	NAP	NAP	NAP	NAP	NAP	93.5[1]	91.7[1]	93.3[1]	88.0[1]
Per Capita Income	4,157[1]	3,997[1]	NAV	2,284[2]	9,587[3]	12,173[3]	4,942[1]	3,601[1]	4,714[1]	4,233[1]
Percent of Families Below Poverty[c]	11.7[1]	12.6[1]	NAV	NAV	19.8[3]	12.5[3]	8.8[1]	17.5[1]	8.3[1]	12.9[1]
Percent on AFDC	10.1[4]	20.1[5]	NAV	NAV	17.9[3]	12.8[3]	2.1[6]	3.0[7]	12.5[8]	9.9[9]
Estimated Pool of Eligible Teens[d]	162[10]	135[11]	328[12]	495[12]	1,429[13]	1,384[13]	1,748[14]	1,819[15]	112[16]	114[16]

SOURCE: [1] United States Bureau of the Census, County and City Data Book, 1977 (a statistical abstract supplement), Washington, DC: United States Government Printing Office 1978.

[2] New York City Department of City Planning, Personal Communication, June 1980.

[3] Detroit Citizen Survey Rounds 1 and 2, 1976. Profile Package for Data Presentation Areas; City of Detroit Planning Department, Data Coordination Division, March 1979.

[4] Commonwealth of Massachusetts, Department of Public Welfare, Research and Statistics Office, Personal Communication, January 1982.

[5] Connecticut Chart Book 1979-80, Department of Income Maintenance, Research and Statistics Unit.

[6] Arizona Department of Economic Security, Labor Market Information, Personal Communication, June 1980.

[7] San Antonio Department of Human Resources, Personal Communication, June 1980.

[8] City of Riverside Department of Social Services, Welfare Assistance Administration, Personal Communication, December 1980.

[9] Fresno County Department of Social Services, Program Manager, Personal Communication, December 1980.

[10] Massachusetts Public Health Department, Office of Vital Statistics. Data are for 1978, Personal Communication, June 1980.

[11] Connecticut Department of Health, Office of Vital Statistics. Data are for 1979, Personal Communication, June 1980.

[12] New York City Health Department, Bureau of Vital Statistics. Data are for 1979, Personal Communication, June 1980.

[13] City of Detroit Department of Public Health, Office of Vital Statistics. Data are for 1978, Personal Communication, June 1980.

[14] Arizona Health Department, Vital Records. Data are for 1979, Personal Communication, June 1980.

[15] Texas Department of Health, Vital Statistic Branch. Data are for 1979, Personal Communication, June 1980.

[16] California Department of Health, Center for Health Statistics. Data are for 1978, Personal Communication, December 1980.

NOTES: [a] The information provided is for 1975, except as otherwise indicated.

[b] The information provided is for 1974, except as otherwise indicated.

[c] The information provided is for 1970, except as otherwise indicated.

[d] The estimates used birth rate information from each site for the most recent year available. The formula used varied somewhat from site to site, since some sites were only able to provide information for all teenagers, rather than for specific ages. In some cases, information was unavailable for ethnic subgroups. The basic approach was to estimate teens up to age 17 who had given or were going to give birth, for the target ethnic group, who were eligible for AFDC.

[e] NAV = information not available

[f] NAP = information not applicable for this site

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large as (and preferably larger than) those of the corresponding program sites, and if those pools included a sufficient number of teens with appropriate racial and socioeconomic characteristics. Table 2.2 presents the estimated number of eligible teens in the experimental and comparison sites.

The final criterion involved a consideration of available services in comparison communities. The configuration of available services for teen mothers/pregnant teens was matched as closely as possible to the service configuration in the corresponding program sites before Redirection was established. Detailed information about programs and services available in potential comparison sites was obtained by telephone interviews with service providers in the various sites.

Thus, the comparison sites were selected in such a way as to minimize pre-treatment differences between the experimental and comparison groups. Sites were matched in terms of region, sociodemographic characteristics, size of the pool of eligible teens, and service configuration in the community.

2. Recruitment of Subjects

Efforts were made to recruit comparison subjects in a manner analagous to the recruitment of Redirection participants. The assumption underlying this strategy was that, in any given community, there are individual differences in service receipt that are related to outcomes. Some teens are more integrated into the social services network in their community than others, and this integration could affect employment and education options, knowledge about birth control, and so on. For this reason, comparison teens were not randomly selected from birth records or from households. Instead, the principal means of recruitment was through referrals from community agencies (hospitals, schools, social service agencies, WIC programs, welfare agencies) and word-of-mouth referrals from the comparison teens. This procedure paralleled the recruitment efforts of the Redirection programs.

Our recruitment strategy probably has validity on another basis. Few teen parents are totally unconnected with the service delivery system. Redirection participants are not being compared with a "no-treatment" group; indeed, it would probably prove impossible to identify such teens. The research question is whether participation in this particular program improves the outcomes for teen mothers, compared to what their outcomes would have been if they were not in the program (and therefore getting some services elsewhere). It therefore seems justifiable to recruit teens from other service providers.

3. Screening

Agencies cooperating with us in the comparison sites differed with regard to their method of providing us with potential respondents. Some agencies provided us with lists of names, while others screened girls and obtained consent forms. Whatever the method used, interviewers routinely screened referrals to ascertain their age, welfare status, and parity prior to scheduling an appointment, thereby guaranteeing that the comparison subjects were comparable to the participants in terms of basic eligibility criteria.

4. Matching

Pair-matching was not considered desirable or practical for this study, particularly since there were concerns about the size of the pool of eligible teens in each site. Nevertheless, efforts were also made to "balance" or approximately match experimental and comparison subjects in terms of age, parity and ethnicity. That is, similar proportions of teens for different age groups (15 or under/16-17), parity statuses (pregnant/parent/pregnant and parent) and ethnic groups (black/Hispanic/white) were recruited for each matched pair of sites. Although the size of the eligible pool of teens typically made it impossible to achieve a perfect match, this procedure prevented extreme skewness in the distribution of characteristics of treatment and comparison subjects. The success of our efforts to balance the groups is reviewed in Appendix A.

5. Data Analysis

While the recruitment strategy minimizes the potential for systematic group differences, some degree of selection bias is still likely to be present prior to the implementation of the project. Since we cannot know whether comparison group outcomes are an accurate proxy for those outcomes that would have occurred for Redirection women if they had not received services, there is no way to reliably ascertain the degree of selection bias present in any particular analysis. Our analysis strategy will therefore utilize two different analytic procedures--analysis of covariance and selection modeling--to evaluate program impact. Both methods are designed to correct for bias. In addition, the use of different techniques allows us to compare research results. If minimal selection bias remains following statistical adjustments, estimates of the project's impact obtained from these two procedures should be similar. If, on the other hand, the resulting estimates are widely divergent, it is less likely that group differences have been properly accounted for. In either case, the interpretation of program effects will be enhanced by the comparison of the results of different analytic procedures.

The first technique, analysis of covariance (ANCOVA) is the most widely utilized analytic technique in quasi-experimental designs. ANCOVA is typically employed to statistically adjust estimates of treatment effect for known differences in the characteristics (covariates) of the groups being compared. When employed in regression models for quasi-experiments, covariates serve two purposes. First, covariates reduce error variance by attributing a portion of the variation in the dependent variable to exogenous factors. This decreases the standard error of regression coefficients, producing more precise estimates of the effects of treatment. Second, to the extent that selection differences are associated with specific exogenous variables, covariates will also reduce or even eliminate the selection bias present in the analysis. Thus, the use of covariates as statistical controls not only increases the precision of treatment effect estimates, but diminishes the bias in these estimates as well.

One of the potential shortcomings of ANCOVA is that the available covariate information may not control for all relevant group differences contributing to selection bias. If certain relevant factors remain unmeasured or are not employed as covariates, then an ANCOVA will result in only a partial adjustment for differences between groups, leaving some residual selection bias that will still produce over- or underestimates of the true treatment effects. One alternative approach, recently developed by economists for the analysis of labor markets, suggests that more appropriate adjustments for selection bias can be made by modeling the selection process that segregates subjects into the treatment and comparison groups. This is the other major analytic procedure to be used in the Project Redirection evaluation.

According to this approach, if unobserved variables, such as motivation or ability, affect both the outcome of interest and the decision to participate in a program, then group status is potentially endogenous with respect to behavioral outcomes. Since ordinary least squares (OLS) estimators will generally be biased in this case, a two-stage estimation procedure is necessary. First, the selection process is modeled by performing a maximum likelihood logit or probit analysis of the relationship between the group status dummy variables and factors hypothesized to influence program participation. In the second stage, either an estimate of the probability that a subject will be in the treatment group or a correction factor (the inverse of Mill's ratio) is inserted in the ANCOVA model when estimating treatment effects. This procedure is designed to purge estimates of treatment effect of bias attributable to the endogeneity of group status and behavioral outcomes. Descriptions of this technique may be found in Maddala and Lee, 1976; Heckman, 1979; Barnow, Cain and Goldberger, 1980; and Olsen, 1979.

In summary, the threat of selection bias has been addressed both by features of the research design and by the data analysis strategy. Procedures used to identify comparison sites and subjects were designed to enhance the comparability of the experimental and comparison groups. Existing differences will be further adjusted by the use of statistical controls.

While these procedures may not entirely eliminate treatment and comparison group differences, any residual selection bias is unlikely to be of a magnitude that will alter substantive conclusions regarding the benefits of the project.

CHAPTER III

Findings Related to the Redirection Program Rationale

This chapter focuses on the current status of our sample of teen mothers and mothers-to-be with respect to their investment behaviors and resources for investment. We have used the conceptual framework described in the introduction to organize the vast amounts of data collected in the baseline survey. The data from all eight sites have been aggregated since the purpose of this chapter is to examine the teens' need for, and ability to profit from, Project Redirection. We are examining here whether the rationale for the program is justified on the basis of the pre-treatment data.

The chapter has eight major sections. The first section describes the major demographic characteristics of the sample. The remaining sections describe the investment behaviors and resources of the sample with respect to education, employment, fertility and family planning, health, services and supports, psychological factors, and home environment.

In the last seven sections, differences within the sample that are attributable to major background characteristics[6] (age, ethnicity, and parenting status) are also discussed. For these analyses, age was categorized as 15 or under versus 16 or 17; ethnicity was categorized as Hispanic or black;[7] and parenting status was categorized as currently pregnant versus currently a parent.[8]

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[6] Marital status was not used as an independent variable for two reasons. First, only a small number of girls had ever been married (N=38). Second, marital status and ethnicity were highly correlated.

[7] When major intra-group differences were observed within the Hispanic group (i.e., Chicanas and Puerto Ricans), a note of this is made in the text. When such intra-Hispanic differences are not noted, either the differences were not significant or the sample sizes for the particular variable were too small to perform a reliable statistical comparison.

[8] Twenty-three respondents (4.5 percent) were pregnant mothers. Because this group was so small, the data were combined, for most analyses, with the data from the "mothers" group. However, when pregnancy was a relevant attribute (e.g., in examining health variables), this group was included with the pregnant teens.

A. Demographic Characteristics of the Sample

A total of 514 respondents comprise the baseline sample: 250 Redirection participants and 264 comparison group members. This section of the report provides a description of the demographic characteristics of the sample including ethnicity, age, parity, number of children and marital status. Site-specific data are provided in order to orient the reader to the nature of the sample.

1. Race/Ethnicity

As shown in Table 3.1, the overwhelming majority of respondents were either black (65.8 percent) or Hispanic (31.5 percent).[9] Two factors account for this ethnic distribution. First, Riverside, the site expected to recruit predominantly white respondents, was not far enough along in its enrollment process to be included in this analysis. Secondly, whereas Phoenix had at one point anticipated recruiting up to one-third of their respondents from the white community, in fact, fewer than 9 percent of their early participants were white. San Antonio, the comparison match for Phoenix, recruited even fewer whites. In all crosstabulations dealing directly with ethnicity, the three Native American subjects have been removed from the total. Clearly three in a sample of 514 is too small to tell us anything meaningful about Native American teenage mothers. While all the tables presenting data by ethnicity do include the data on whites, we have omitted all references to the white teens in the text because of the small number in this subsample. Future reports will include data from the white respondents in Riverside and Fresno.

The overwhelming majority of the sample was born in the continental United States. This is true even for the Hispanic population with 71 percent reporting having been born here. Separating the Chicana respondents from the Puerto Ricans, however, we find a noticeable difference. In Boston and Hartford, the two Puerto Rican sites, the percentage born on the

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[9] Of the Hispanics, 46.1 percent were Puerto Rican; 49.3 percent, Chicana; and 4.6 percent categorized as "other."

TABLE 3.1

ETHNICITY OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS, BY SITE

Site	Percentage Distribution of Teens, by Ethnicity				
	Hispanic	Black	White	Native Americans	All Ethnic Groups
Boston	100.0	0.0	0.0	0.0	100.0 (N=36)
Harlem	3.6	96.4	0.0	0.0	100.0 (N=56)
East Detroit	0.0	100.0	0.0	0.0	100.0 (N=69)
Phoenix	39.3	49.4	7.9	3.4	100.0 (N=89)
Number in Experimental Sites	73	167	7	3	250
Hartford	100.0	0.0	0.0	0.0	100.0 (N=35)
Bedford-Stuyvesant	3.2	96.8	0.0	0.0	100.0 (N=62)
West Detroit	0.0	100.0	0.0	0.0	100.0 (N=78)
San Antonio	56.2	39.3	4.5	0.0	100.0 (N=89)
Number in Comparison Sites	87	173	4	0	264
Total Number of Respondents	160	340	11	3	514

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

mainland was 30.6 percent and 51.7 percent, respectively. Of those Hispanics not born within the continental United States, over half have lived here five years or more. In terms of comfort with the English language, 77.4 percent reported that they get along very well or pretty well in English.

2. Age

The mean age of the aggregate sample was 15.9, with a standard deviation of 1.0. Thirty-one percent of the sample was 15 years old or younger, and the remaining 69 percent were 16, 17, or 18. The ages ranged from 11 (one respondent) to 18 (two respondents).[10]

Within the eight sites, there was considerable variation with respect to the age of teens recruited. The mean ages ranged from a low of 15.4 in Boston to a high of 16.4 in Detroit West ($F = 4.9$, $df = 7, 506$, $p < .0001$). The differences appear to be even more marked when one compares the percentage of teens below versus at or above age 16 in the eight sites. Table 3.2 summarizes this information. Thus, in Boston, 52.8 percent of the girls were in the younger age group, compared with 14.1 percent in Detroit West.

The Hispanic respondents tended to be younger than the black or white respondents in all four sites in which Hispanics were recruited in large numbers. As shown in Table 3.3, 43.4 percent of the Hispanics were fifteen or younger, while only 26 percent of the blacks were in the younger group. The mean ages were 15.6 for Hispanics and 16.1 for blacks ($F = 7.42$, $df = 1, 497$, $p < .0001$).

Respondents in the experimental group were slightly younger ($\overline{X} = 15.86$) than respondents in the comparison group ($\overline{X} = 16.02$). This difference was marginally significant ($F = 2.8$, $df = 1, 512$, $p < .10$).

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[10] Although Project Redirection eligibility requirements stipulated that enrollees must by 17 years old or younger, two program sites (East Detroit and Phoenix) each enrolled one 18 year old.

TABLE 3.2

AGE OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY SITE

Site	Percentage Distribution of Teens, by Age		
	15 Years or Younger	16 or 17 Years Old[a]	All Ages
Boston	52.8	47.2	100.0 (N=36)
Harlem	19.6	80.3	100.0 (N=56)
East Detroit	26.0	74.0	100.0 (N=69)
Phoenix	41.5	58.4	100.0 (N=89)
Number in Expermental Sites	85	165	250
Hartford	40.0	60.0	100.0 (N=35)
Bedford-Stuyvesant	27.4	72.6	100.0 (N=62)
West Detroit	14.1	85.9	100.0 (N=78)
San Antonio	37.1	62.9	100.0 (N=89)
Number in Comparison Sites	75	189	264
Total Number of Respondents	160	354	514

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

[a] Includes two 18-year-old respondents in the experimental sites.

TABLE 3.3

AGE GROUP COMPOSITION OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY ETHNICITY

	Percentage Distribution of Teens, by Ethnicity			
Age Group	Hispanics	Blacks	Whites	All Ethnic Groups
15 Years or Younger	43.4	26.0	18.2	22.5
16 or 17 Years Old[a]	56.6	74.0	81.8	77.5
Total	100.0	100.0	100.0	100.0
Total Number of Respondents	161	339	11	511

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

[a] Includes two 18-year-olds.

3. Parenting Status

The original goal of the Redirection program was to have the participant group divided evenly between young women who were expecting to deliver their first child, and those who already had children. Although there is some variation by site (see Table 3.4), the total sample came very close to meeting this goal: 49.8 percent were pregnant non-mothers, 45.7 percent were non-pregnant mothers, and 4.5 percent were pregnant mothers. Overall, 50.4 percent of the experimental group and 49.2 percent of the control group were pregnant non-mothers.

The relationship between parenting status and age was what one would expect, with 61.9 percent of the 15 years and younger girls being pregnant non-mothers compared to 44.4 percent of the older girls. Given the relationships between race and age, and between parity and age, it is not surprising that 60.8 percent of the Hispanics were pregnant non-mothers, compared with 45.2 percent of the blacks.

As also would be expected given the age eligibility requirement for this program, only 6.2 percent of the sample had delivered more than one child. There were 31 girls with two children, and one girl with four children. The number of children varied a good deal by site (Table 3.5). Of course, a portion of this variation can be accounted for by variation in the age of the respondents.

4. Marital Status

The vast majority of the sample (92.6 percent) was single. Among the 38 girls who had ever been married, 31.6 percent were either separated or divorced at the time of the interview. Despite their relative youth, the Hispanic respondents were the most likely to have married. In fact, 17.4 percent of the Hispanics had married, compared with 2.7 percent of the blacks and 9.1 percent (N=1) of the whites. The distribution of marital status categories by site reflects these ethnic differences. Boston is an extreme example, with 25 percent of the participants in that site having been married at some time. (See Table 3.6.)

TABLE 3.4

PARENTING STATUS OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY SITE

Site	Percentage Distribution of Teens, by Parenting Status			
	Pregnant Nonparent	Parent	Pregnant Parent	All Parenting Groups
Boston	69.4	25.0	5.6	100.0 (N=36)
Harlem	50.0	48.2	1.8	100.0 (N=56)
East Detroit	33.3	60.9	5.8	100.0 (N=69)
Phoenix	56.2	39.3	4.5	100.0 (N=89)
Number in Experimental Sites	126	113	11	250
Hartford	57.1	40.0	2.9	100.0 (N=35)
Bedford-Stuyvesant	71.0	27.4	1.6	100.0 (N=62)
West Detroit	14.1	80.8	5.1	100.0 (N=78)
San Antonio	61.8	31.5	6.7	100.0 (N=89)
Number in Comparison Sites	130	122	12	264
Total Number of Respondents	256	235	23	514

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

TABLE 3.5

NUMBER OF CHILDREN OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY SITE

Site	Percentage Distribution of Teens, by Number of Children: No Children	One Child	Two or More Children	All Parity Groups
Boston	69.4	30.6	0.0	100.0 (N=36)
Harlem	50.0	42.9	7.1	100.0 (N=56)
East Detroit	33.3	59.4	7.2	100.0 (N=69)
Phoenix	56.2	40.4	3.4	100.0 (N=89)
Number in Experimental Sites	126	112	12	250
Hartford	57.1	25.7	17.1	100.0 (N=35)
Bedford-Stuyvesant	71.0	27.4	1.6	100.0 (N=62)
West Detroit	14.1	73.1	12.8	100.0 (N=78)
San Antonio	61.8	34.8	3.4	100.0 (N=89)
Number in Comparison Sites	130	114	20	264
Total Number of Respondents	256	226	32	514

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

TABLE 3.6

MARITAL STATUS OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY SITE

	Percentage Distribution of Teens, by Marital Status			
Site	Single	Married	Separated or Divorced	All Marital Groups
Boston	75.0	19.4	5.6	100.0 (N=36)
Harlem	96.4	1.8	1.8	100.0 (N=56)
East Detroit	98.6	1.4	0.0	100.0 (N=69)
Phoenix	98.9	1.1	0.0	100.0 (N=89)
Number in Experimental Sites	237	10	3	250
Hartford	88.6	2.9	8.6	100.0 (N=35)
Bedford-Stuyvesant	98.4	1.6	0.0	100.0 (N=62)
West Detroit	97.4	1.3	1.3	100.0 (N=78)
San Antonio	79.8	14.6	5.6	100.0 (N=89)
Number in Comparison Sites	239	16	9	264
Total Number of Respondents	476	26	12	514

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

Age was unrelated to marital status in this sample: 93.1 percent of the girls 15 and under were single compared with 92.4 percent of the older girls. While one might have expected a higher proportion of older girls to have been married, the absence of a relationship reflects the greater tendency of Hispanic girls (who were on the average younger) to have married. In fact, the average age at marriage among the Hispanics was 14.9, compared with 15.8 for blacks.

In summary, respondents were predominantly black and Hispanic, and had never been married. The average age was just under 16 years old. The sample was evenly divided in terms of parenthood: approximately half were already mothers, and the other half were expecting to deliver a first child.

B. Findings Relating to Educational Outcomes

A successful school-to-work transition in our society is dependent upon the individual's motivation and ability to assume a place in the adult world of work. For the vast majority of entry-level jobs, employers judge both motivation and ability on their applicants' educational credentials. A high school diploma or GED certificate represents the minimum educational attainment that many employers are willing to consider. Without a diploma, individuals are handicapped in the market place. For example, in 1979 the unemployment rate for dropouts (26.0 percent) was nearly double that for high school graduates (15.0 percent) and the rate for female dropouts (36.6 percent) was higher than that for male dropouts (18.7 percent). (U.S. Department of Labor, 1981.) In an economy such as our current one in which youth unemployment is generally high, those without a diploma face even stiffer competition for scarce jobs.

Encouraging young mothers to invest in their future economic security by returning to and completing school has become an important social goal, and a key objective of Project Redirection. Social concern about the educational attainment of young parents is well founded. Pregnancy is the most commonly reported reason for dropping out of school among American females. There is also clear evidence that early childbearing is associated with lower lifetime levels of educational attainment. For example, Card and Wise (1978), using data from a large-scale longitudinal study of high school students, found that women who delivered a baby before age 17 completed significantly fewer years of school than their peers who delayed childbearing. Furthermore, there was a direct correlation between a woman's age at first birth, and amount of education at age 29 ($r = .54$). Even after controlling for academic ability, socioeconomic status, race, and educational expectations in grade 9, young mothers were more likely than their classmates to have their education truncated at an early age. Similar findings have been reported by other investigators (Bacon, 1974; Foltz, et al., 1972; Coombs and Cooley, 1968; McLaughlin, 1977; Moore and Waite, 1977; Furstenberg, 1976; Presser, 1975, 1978; Stine, et al., 1964).

The most recent statistics available on teen parents and education were released in a special publication by the Alan Guttmacher Institute (AGI, 1981). According to this document, approximately 60 percent of all teen mothers aged 18 have not completed high school, and over 40 percent of 19 year old teen mothers do not have a diploma.

In this sample, because of the teens' young age, there were no data relating to high school completion, but our interview did include a number of important educational outcomes. In the first subsection below we examine such educational investment behaviors as current educational status, age/grade deficiencies, and in-school performance. In the second subsection we review our findings with respect to an enabling factor: educational aspirations.

1. Educational Investment Behaviors

The data from the Project Redirection baseline survey provide further evidence that young mothers suffer educational handicaps compared to their peers. Only slightly more than half (56 percent) of the girls were in school or a GED program at the time of the interview, as shown in Table

3.7.[11] Black teens were substantially more likely[12] to have been in school (65.3 percent) than were Hispanic teens (39.0 percent).[13] Pregnant teens who were about to become first-time parents were more likely than mothers to be in school.

Most of the girls who had dropped out of school said they planned to return to school (87.3 percent) and many (47.3 percent) planned to return within one or two months of the interview. Hispanic girls (18.6 percent) were more likely than girls from the other ethnic groups (less than 3 percent) to say they had no plans to return to school, as indicated in Table 3.8. First-time pregnant teens (83.3 percent) were somewhat less likely to have plans to return to school than the teens with a baby (90.5 percent), but this difference was not significant. Among those with no plans to return to school, caring for the baby was the most commonly reported reason (42.1 percent), although an additional 32 percent simply stated that they did not want to go back to school and 16 percent said they preferred to work.

As might be anticipated, pregnancy and caring for their newborn infant were the most frequently cited reasons by the teens for dropping out of school in the first place. These reasons accounted for over 50 percent

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[11] The dropout rate of 43.4 percent for this sample is substantially higher than that for all students. For example, in 1978, 1.5 percent of all females aged 14-15 and 8.6 percent of those aged 16-17 had dropped out of school (National Center for Education Statistics, 1980a). The drop out rates were especially high for Hispanic teens: 3.4 percent for 14-15 year old girls and 12.2 percent for 16-17 year old girls (National Center for Education Statistics, 1980b).

[12] The data for the white teens are presented in the tables primarily for descriptive purposes: the subsample of whites is too small to draw firm conclusions or to warrant discussion. It should be noted that, although statistical tests were run for the three ethnic groups and the results presented here, the same pattern of significant differences emerges in comparisons between black and Hispanics only.

[13] The difference between the two major Hispanic groups was quite marked with respect to school enrollment: 46.6 percent of the Chicanas and 27.8 percent of the Puerto Rican girls were currently enrolled at the time of the interview ($X^2 = 5.3$, df = 1, $p < .05$).

TABLE 3.7

SCHOOL ENROLLMENT STATUS OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY ETHNICITY AND PARENTING STATUS

Group	Percentage Distribution of Teens, by School Status at Baseline[a] Enrolled in School at Baseline	Not Enrolled in School at Baseline	All Respondents
Ethnic Group			
Hispanic	39.9	61.0	100.0 (N=154)
Black	65.3	34.7	100.0 (N=337)
White	36.4	63.6	100.0 (N= 11)
All Ethnic Groups	56.6	43.4	100.0 (N=502)
Total Number of Respondents	284	218	502
Parenting Group			
Pregnant Teens	61.0	39.0	100.0 (N=249)
Mothers	52.0	48.0	100.0 (N=256)
Both Parenting Groups	56.4	43.6	100.0 (N=505)
Total Number of Respondents	285	220	505

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

Two-tailed chi-square tests for both distributions are statistically significant at the .0001 level.

[a] The "in school" group includes all respondents enrolled in a school or GED program at the time of the baseline interviews.

TABLE 3.8

FUTURE SCHOOL PLANS OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY ETHNICITY

Future School Plans	Percentage Distribution of Teens, by Ethnicity			
	Hispanic	Black	White	All Ethnic Groups
Respondent Plans to Return to School	75.3	97.2	100.0	87.3
Respondent Does Not Plan to Return to School	18.6	2.8	0.0	9.9
Respondent Is Unsure If She Will Return To School	6.2	0.0	0.0	2.8
Total	100.0	100.0	100.0	100.0
Total Number of School Dropouts	97	109	7	213

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: These data refer only to respondents who were not in school at the time of the baseline interview.

The totals may not add to 100.0 percent because of rounding error.

A two-tailed chi-square test for this distribution is statistically significant at the .0001 level.

of the responses. A substantial minority, however, (17.1 percent) indicated that they had dropped out because they simply did not like school. Hispanic girls were more likely to have said this (22.0 percent) than other girls (12.7 percent). The relationship between pregnancy and school drop out is not necessarily causal in this population. Over one-fourth of all respondents (28.4 percent) acknowledged that they had already dropped out of school prior to their pregnancy. Younger girls aged 15 and under were no more likely than the 16 and 17 year old respondents to have been in school when they first learned they were pregnant.

Most of the girls who were dropouts reported having left school no more than one year prior to the interview, but a substantial percentage (38.7 percent) had not been in school for over a year. Sixteen percent had not attended school for two years or more. As expected, the girls who were carrying their first baby were the group most likely to have recently left school: 40 percent had dropped out within the six month period prior to their interview, compared to 23.3 percent of the mothers ($\chi^2 = 6.4$, df = 1, $p < .01$). Table 3.9 shows that black girls were less likely than girls from other ethnic groups to have been out of a school program for long periods of time: 28 percent of Hispanics, compared with 5 percent of blacks, had been out of school for two years or more.

It is difficult to draw conclusions about the actual school experiences of the sample because the only information we have is self-report, and the information is itself not extensive. The typical student had completed no more than nine years of education. Nearly half of the sample (46.5 percent) had not completed a school year beyond the eighth grade, despite the fact that 68 percent of the sample were 16 and 17 year olds. Thus, it is clear that there were some serious educational deficits.

Among the 287 girls who reported being in school at the time of the interview, only about 5 percent were in a GED program. The remaining 95 percent were in a regular school program, many of them below their normal grade level for their age. Although the failure of the interview schedules to obtain exact birth dates makes it impossible to construct a precise index of age/grade fit, a crude measure was constructed with the data in

TABLE 3.9

LENGTH OF TIME OUT OF SCHOOL AMONG PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS WHO WERE NOT IN SCHOOL AT BASELINE, BY ETHNICITY

Length of Time Out of School	Percentage Distribution of Teens, by Ethnicity			
	Hispanic	Black	White	All Ethnic Groups
Less than 6 Months	26.6	36.4	0.0	30.7
7-12 Months	21.4	39.1	42.9	31.2
13-24 Months	24.4	20.0	28.6	22.3
More Than 24 Months	27.5	4.5	28.6	15.8
Total	100.0	100.0	100.0	100.0
Total Number of Respondents	98	110	7	215

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

A two-tailed chi-square test for this distribution is statistically significant at the .0001 level.

hand by assuming that first grade should have been completed by age seven (in many cases it would be completed by age six, thereby making the measure liberal), second grade by age eight, and so on. Using these standards, it was determined that 80 percent of the respondents were one year older than would be expected based on their highest completed grade and 42 percent were two years older.

A similar analysis was performed for those currently in school. For this analysis, since all but a few respondents were interviewed by the end of February (the date by which most school systems establish age eligibility criteria), and since the focus is not on the completion of a given grade, we tightened the standard: we assumed that to be in-grade for age, a sixth grader had to be no more than eleven in the fall semester or beginning of the spring semester. The results of this analysis revealed that among current school enrollees, only 19 percent of currently enrolled students were in-grade for their age.

The majority of respondents were, or had been, in general school programs (that is, programs that are neither college preparatory nor geared to any vocational preparation). Only 6.3 percent reported being in a college preparatory program, while 10.6 percent were in a vocational education program and 9.8 percent were in a business/secretarial program. Black students were significantly more likely to be enrolled (and to have been enrolled) in such programs than Hispanic students, as shown in Table 3.10. Current school enrollees were significantly less likely than girls who were not currently enrolled to have been in a general school program: 64.5 percent vs. 78.9 percent, respectively ($\chi^2 = 14.7$, df = 5, $p < .01$). The pattern of differences thus suggests the possibility that participation in some special preparatory program (e.g., business, vocational or college prep) constitutes more of a commitment to one's educational and occupational future than participation in a general program.

The interviews also requested information about participation in special programs designed for teen mothers. Among those students currently enrolled in a school program, about one-third (36 percent) were in a special program for the teen parent population (not Redirection). Pregnant

TABLE 3.10

ENROLLMENT IN VARIOUS SCHOOL PROGRAMS OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS, BY ETHNICITY AND SCHOOL ENROLLMENT STATUS AT BASELINE

	Percentage Distribution of Teens, by Ethnicity			
Type of School Program	Hispanic	Black	White	All Ethnic Groups
Teens in School at Baseline[a]				
Vocational	5.0	15.6	0.0	13.1
Business	6.7	13.3	0.0	11.7
College Preparatory	1.7	8.7	0.0	7.1
General	81.7	59.6	75.0	64.5
Don't Know	5.0	2.8	25.0	3.5
Total	100.0	100.0	100.0	100.0
Total Number in School at Baseline	60	218	4	282
Teens Not in School at Baseline[b]				
Vocational	0.0	12.0	0.0	6.5
Business	3.2	12.0	0.0	7.8
College Preparatory	4.3	6.8	0.0	5.5
General	91.4	67.5	100.0	78.9
Don't Know	1.1	1.7	0.0	1.4
Total	100.0	100.0	100.0	100.0
Total Number Not in School at Baseline	93	117	7	217

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

[a] A two-tailed chi-square test for the distribution of teens in school at baseline is statistically significant at the .01 level.

[b] A two-tailed chi-square test for the distribution of teens not in school at baseline is statistically significant at the .001 level.

teens were significantly more likely to be in such a program (52.6 percent) than the mothers (16.8 percent), ($X^2 = 22.2$, df = 1, $p < .0001$). No other demographic variable was associated with participation in a special teen mothers program.

Actual school performance is clearly an important aspect of educational investments. According to self-reports, the grades of the respondents ran the full range from excellent to failing. B's and C's were the most frequently reported grades: 72 percent reported B's and C's in English, and 62 percent reported this grade range for math. Below average grades were acknowledged by 10 percent of the sample for English and 18 percent for math. No significant relationships were observed between grades on the one hand and ethnicity, age and parity on the other. There appears to be little in the self-reports on grades to suggest that these young girls have "disinvested" or disengaged themselves from academic life. On the other hand, the nature of the responses (self-reported achievement, and for the dropouts, retrospective reports) suggests the need for caution in interpreting these data.

Another aspect of student investment is attendance in school. The most frequently reported range of days missed in a typical month was three to five days, reported by 38.4 percent of the respondents.[14] Nearly 10 percent of the sample said that they typically missed more than ten days of school per month. The reasons for missing school were varied, but personal illness (including illness related to the pregnancy) was mentioned by 48 percent of the respondents. Other reasons commonly mentioned included keeping appointments or doing errands (14 percent), staying home to care for the baby (14 percent), and a dislike of school (12 percent). Attendance in school was not significantly related to age, parity or ethnicity.

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[14] According to 1976 data, the average elementary and secondary student misses 17.2 days of school per year, which is an average of 1.5-2.0 days per month (NCES, 1977). Our respondents, therefore, appear to have an attendance record that is 2 to 3 times worse than the norm for all school children.

However, current school enrollees reported missing significantly fewer days from school than the girls who had dropped out. Fewer than 5 percent of the enrollees, compared with 13.6 percent of the dropouts, said they missed more than ten days of school in a typical month ($\chi^2 = 20.9$, df = 6, $p < .001$).

The picture that emerges is one of a number of young women who have withdrawn physically or psychologically from the educational system. A sizeable number had dropped out of school prior to their pregnancy, and many others acknowledged that they did not enjoy school. Many young women had been out of school for moderately long periods of time, and were behind grade for their age. Black teens were repeatedly found to be doing better than other teens on measures of educational progress, but in conclusion, we find that the group of teens included in this study reflect the kind of educational disadvantages that are commonly associated with the population of teenage parents.

2. Educational Enabling Factors: Goals and Aspirations

Aspirations do not in themselves constitute investments, but we may think of a person's goals and aspirations as anticipated investments in one's future. We view the goals and aspirations of this population as important enabling factors: while many of the girls may not necessarily attain their goals, those with limited aspirations presumably do not have sufficient drive or motivation to make substantial personal investments. Little has been said in the literature about the goals and ambitions of the teen parent population. There is some evidence, however, that those girls who have low achievement motivation are less likely than their more motivated peers to practice effective birth control (Goldsmith _et al_, 1972; Shah _et al_, 1975) and therefore most susceptible to a pregnancy. Thus this population is likely to be overrepresented with girls with low academic aspirations. One might hypothesize, given the disadvantaged background of the respondents, their circumstances, and their youth that they would either have modest personal aspirations or unrealistically high ones.

Respondents were asked several questions regarding their educational goals and aspirations. When asked directly how far they wanted to go in school, about half the respondents said they wanted a high school diploma or GED certificate (Table 3.11). Over 20 percent reported that they aspired to a B.A. degree or higher. Consistent with the results on educational behaviors, the black respondents had significantly higher educational goals than girls from other ethnic groups. A full 26.4 percent of the black teens, compared with less than 10 percent of the other girls, aspired to a bachelor's degree or higher ($\chi^2 = 38.9$, df = 8, $p < .0001$). The educational aspirations of the two parenting groups were comparable. Predictably, girls who were in school at the time of the interview had significantly higher aspirations than girls who had dropped out. Whereas 25.5 percent of those in school wanted at least a bachelor's degree, only 14.8 percent of the dropouts had similar aspirations ($\chi^2 = 26.0$, df = 7, $p < .001$).

When asked how likely it was that their educational goals would be reached, only a small minority of respondents (8.5 percent) thought it unlikely that their aspirations would be realized. Some 6.0 percent of the black teens, compared with 12.4 percent of the Hispanics, felt that attainment of their goals was not likely ($\chi^2 = 14.6$, df = 6, $p < .05$). In response to a question regarding possible obstacles to achieving their goals, the most frequently mentioned answer was that caring for their child would be problematic (28.4 percent). Other commonly cited impediments included difficulties in re-adjusting to school and study habits (10.7 percent), inadequate educational preparation or poor grades (10.2 percent), and financial problems (9.3 percent).

The issue of educational aspirations was examined indirectly in two open-ended questions that asked respondents to discuss "their hopes and dreams" for their own future and for their children's future. Approximately 16 percent of the sample spontaneously mentioned some educational objective for themselves. Most frequently, respondents expressed a desire to "finish school" or to "go to college." By contrast, a full 72 percent mentioned educational attainments as a hope for their children's future.

TABLE 3.11

EDUCATIONAL GOALS OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY ETHNICITY

	Percentage Distribution of Teens, by Ethnicity			
Educational Goals	Hispanic	Black	White	All Ethnic Groups
Less Than a Diploma/ GED Certificate	5.0	0.0	0.0	1.4
Diploma/GED Certificate	66.9	43.8	63.6	50.9
Technical School/ Junior College Degree	17.3	29.4	27.3	25.8
Bachelor's Degree	6.5	20.7	0.0	16.1
Graduate Degree (M.A., Ph.D., etc.)	2.9	5.7	9.1	5.0
Don't Know	1.4	.3	0.0	.6
Total	100.0	100.0	100.0	100.0
Total Number of Respondents	139	333	11	483

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

A two-tailed chi-square test for this distribution is statistically significant at the .0001 level.

It is possible that these young mothers or mothers-to-be may have lost hope in their own ability to invest in themselves directly, and may be planning for their children to make that investment in their stead.

In summary, the sample of respondents as a whole seemed reasonably motivated to make personal investments in terms of their education. Black teens, in particular, had aspirations to pursue academic credentials. This finding is consistent with the results reported earlier on actual educational behaviors among respondents in this sample. The fact that the majority of respondents felt that attainment of their educational goals was likely, however, suggests that many of these teens have unrealistic expectations about the obstacles they will need to hurdle. On the other hand, the fact that so many girls seem to hold education in higher esteem for their children than for themselves may indicate a loss in faith in their own ability to "make it" in the educational arena.

C. Findings Relating to Employment Outcomes

The findings relating to the employment experiences of teen parents are critical--not only because a major thrust of Project Redirection is in the employment arena, but also because a major portion of a person's long-term life outcomes is often intricately linked to the world of work. There is considerable consensus in the literature that the occupational outlook for this population is bleak. Early childbearing has repeatedly been found to be associated with low and undependable income, reduced lifetime labor participation rates, and higher rates of unemployment (Bacon, 1974; Mc Laughlin, 1977; Presser, 1975; Trussell, 1975). In a longitudinal study of a national sample of high school students, Card and Wise (1978) found that, 11 years after high school, women who had been teenage mothers had less prestigious jobs, had lower income, and were less satisfied with their jobs than their classmates. Adolescent parents were significantly underrepresented in professional jobs and overrepresented in blue-collar jobs.

Moore, et al (1979) used data from two national longitudinal surveys to examine the impact of early childbearing on future occupational and income outcomes. They found that occupational status, hours worked, wages, earnings, and welfare receipt were not affected directly by early childbearing. However, early births did have a direct effect on total number of children and on educational attainment, both of which strongly affect occupational outcomes. Similar conclusions were reached in a path analysis of the National Longitudinal Survey data (McLaughlin, 1977).

Thus, there is abundant evidence that the long-term economic propects for teen parents are unpromising. However, little is known about their work experiences as teenagers. Early work experience is presumed to lead to the development of important assets that can be marketed in the labor force at some later point. Indeed, the accumulation of job skills during the teen years has been shown to affect subsequent labor market experience. Johnston and Bachman (1973), for example, found that work experience during high school was associated with low levels of later unemployment, while unemployment rates were highest for those who failed to work while in high school. Similarly, Adams and Mangum (1978) found that, in general, difficult labor market experiences in the teen years was associated with employment problems later in life.

Given the importance of employment during youth for later labor force experiences,[15] it seems reasonable to use the work behaviors of our sample as a proxy for the longer-range objectives of Project Redirection. However, while we view current and past work experience among our respondents as an important investment in their future occupational fortunes, it must nevertheless be acknowledged that there are substantially more external constraints on their work-related investments than is true in the case of schooling. School enrollment and completion for this group has as a primary external obstacle the availability of acceptable child care. With respect to employment, child care may continue to limit work options, but the labor market itself is the most formidable constraint. The majority of our respondents have four strikes against them: they are young, they are female, they are minority, and they live in urban areas. Unemployment rates continue to be highest for precisely this group of people. For example, in 1979 the unemployment rate was 36.5 percent for black teenagers, whereas the overall unemployment rate for those age 25 and over was 3.9 percent (U.S. Dept. of Labor, 1980). The unemployment rate for black women aged 16-19 was nearly three times (2.67) as high as the rate for same-aged white women in 1978 (Bowers, 1979).

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[15] The analysis of National Longitudinal Survey data by McLaughlin (1977) suggests that the impact of early work experience for teen mothers is even more powerful than it is for later childbearers. He found that when the first child is delayed until 19 years or older, the woman's short-term earning potential is largely a function of education. However, for mothers 18 years or younger, the earning potential of the short-term job (i.e., a job held within five years after the birth) is largely a (negative) function of job experience prior to the birth.

As in the case of the educational outcomes, we examined two broad categories of employment outcomes with the baseline survey data. In the first subsection several aspects of the respondents' employment behaviors and experiences are examined, including exposure to employment training. In the second subsection we present the findings with respect to factors presumed to enable occupational investments: job readiness and occupational aspirations.

1. Employment-Related Investment Behaviors

The baseline interviews asked respondents to identify all jobs at which they had worked for pay (including babysitting), the duration of these jobs, and their reason for leaving these jobs. Among the 514 respondents, only 38 (7.4 percent) were working at the time of the interview, the majority of these on a part-time basis (82.5 percent). Most of the girls (70.0 percent) had, however, worked for pay at some time prior to the interview. The average number of jobs held was 1.1, as shown in Table 3.12. When babysitting and household work are excluded, the average number of jobs per respondent was .92. Sixty percent of the sample had had at least one paying job that did not include babysitting. Older girls in the 16-17 age group had significantly more work experience than younger girls, but parity and ethnicity were unrelated to the number of jobs held.

TABLE 3.12

MEAN NUMBER OF JOBS EVER HELD BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY AGE, PARENTING STATUS, AND ETHNICITY

Group	Mean Number of Jobs Including Babysitting or Household Work	Mean Number of Jobs Excluding Babysitting or Household Work	Number in Group
Age Group****			
15 Years Old or Younger	.8	.6	160
16-17 Years Old	1.3	1.1	354
Parenting Group			
Pregnant Teens	1.2	.9	256
Mothers	1.1	.9	258
Ethnic Group			
Hispanics	1.1	.9	161
Blacks	1.1	.9	339
Whites	1.3	1.0	11
All Respondents	1.1	.9	514

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: ****Two-tailed t-test statistically significant at the .0001 level.

A total of 577 jobs were reported by the 360 girls who had ever worked, for an average of 1.6 jobs held by those with work experience. Of the 577 jobs, the largest category was those jobs classified (using DOT codes) as household work, which includes babysitting. When the babysitting jobs are removed from consideration, a total of 308 girls had had work experience on 472 jobs, for an average of 1.5 jobs. The vast majority of the work experiences were in unskilled jobs, as one might expect for this age group. The ten most commonly reported jobs, shown in Table 3.13, accounted for two-thirds of all jobs held, and all but one (typist/secretary) were jobs that require no specialized training.

Many of the non-babysitting jobs held were summer jobs that had involved two to four months of work. The majority of jobs, in fact, (79.5 percent) had endured four months or less. Of the short-term jobs, 70.2 percent had terminated because they were summer employment only. Pregnancy had been the cause of termination of 37 jobs (8.3 percent). Respondents had quit 135 (30.3 percent) of the jobs for a variety of reasons other than pregnancy, such as failure to get paid, dislike of the work, and child care problems. Only 20 (4.5 percent) of the jobs were reported to be terminated because of lay-offs and an even smaller percentage (2.5 percent) were reportedly due to firings. A large percentage (42.9 percent) of the lay-offs were among those who had held the job for 10 months or more.

The interviews explored another aspect of preparation for future work: training for various job-related skills. Table 3.14 shows the percent of respondents who reported having training in seven specific areas. The majority said they had been taught how to fill out an application, and about half had received training relating to how to act on the job, how to act on a job interview, and how to get along with people at work. The areas in which training was least common were training for specific skills and how to find a job. In all categories of training, school was mentioned most frequently as the source of the training, followed by instruction offered by some community service organization.

A crude measure of the respondents' exposure to job training was developed by summing the number of "yes" responses to the seven categories

TABLE 3.13

MOST COMMONLY REPORTED JOBS HELD BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Type of Job	Percentage Distribution of Jobs
Babysitter/Household Worker	18.4
Cashier	9.5
Clerical Work, File Clerk	9.5
Child Care Worker	7.5
Waitress	5.4
Camp Counselor	4.7
Typist/Secretary	4.4
Kitchen Worker, Fast Food Clerk	3.5
Teacher Aide	3.3
Cleaner, Buildings	2.1
All Other Jobs	31.6[a]
Total	100.0
Total Number of Jobs Held by Respondents	571

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent because of rounding error.

[a] Examples of other jobs in this category include grocery clerk, sales, and factory work.

TABLE 3.14

PARTICIPATION IN SELECTED JOB-RELATED TRAINING EXPERIENCES BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY SOURCE OF TRAINING

Type of Training Experience	Percentage of Teens Having Received Specified Training[a]	Percentage Receiving Specified Training From Various Sources						
		School	On-The-Job	CBO[b]	Employment Program	Home	Other	All Training Sources
How to Find a Job	32.9	61.1	5.4	19.8	6.6	4.8	2.3	100.0 (N=168)
How to Fill out an Application	58.1	66.1	4.7	16.6	4.1	5.6	2.9	100.0 (N=297)
How to Act in a Job Interview	48.9	65.9	5.6	14.5	5.2	5.6	3.2	100.0 (N=250)
How to Get Along With People at Work	48.5	59.4	8.6	16.0	5.7	6.1	4.2	100.0 (N=248)
How to Act on the Job	49.8	58.1	9.7	16.1	5.2	6.9	4.0	100.0 (N=254)
Training for Specific Job Skills	29.0	58.2	15.1	15.8	6.8	.7	3.4	100.0 (N=148)
How to Decide on the Kind of Job You Want	38.7	63.1	7.2	15.4	6.7	2.6	5.0	100.0 (N=198)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

[a] These data are based on responses from 511 respondents.

[b] CBO signifies Community Based Organizations (e.g. the YMCA, Urban League, etc.). Project Redirection programs are operated in the five sites by CBOs.

of training listed. On average, these teens had received training in 2.7 areas. As indicated in Table 3.15, black teens reported having had exposure to a significantly broader range of job training experiences than other teens. Girls in the 16-17 year old age range had received more training than younger girls. Training experience was unrelated to the parity groupings.

In summary, the majority of teens in this study had had one or more jobs for pay at some time in their young lives. If one excludes babysitting and household chores (on the grounds that such jobs do not really constitute labor force participation), the percentage of teens with work experience drops from 70 to about 60 percent. Still, given the obstacles that these girls probably have faced in finding work, and given the fact that 30 percent of them are below the minimum working age for most jobs, their work experience is noteworthy, and suggests their willingness to engage in the world of work.

2. Employment-Related Enabling Factors: Job Readiness and Occupational Aspirations

Barriers to youth employment include their lack of work experience, ignorance about employer expectations, and insufficient job seeking skills. While there is a fair amount of documentation regarding the actual work experiences of teenage parents (at least the long-term prospects for employment), little is known about their job-related training experiences. In this section we report the survey findings on several aspects of job readiness that are presumed to prepare teens for the world of work. Where possible, the findings are compared to norms or findings from other groups.

The respondents were administered two sections of a battery of employment-related tests prepared by the Educational Testing Service (ETS) for teenage students. The first section was a 30-item career maturity inventory that examined decisiveness and personal planning relating to career choice. For example, two typical items are "You get into an occupation mostly by chance" and "I plan to follow the line of work my

TABLE 3.15

MEAN NUMBER OF JOB-RELATED TRAINING EXPERIENCES OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY AGE, PARENTING STATUS, AND ETHNICITY

Group	Mean	Number in Group
Age Group**		
15 Years Old or Younger	2.3	160
16-17 Years Old	2.9	351
Parenting Group		
Pregnant Teens	2.7	253
Mothers	2.7	258
Ethnic Group****		
Hispanics	1.6	161
Blacks	3.3	339
Whites	2.2	11
All Respondents	2.7	511

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: These data refer to the number of different types of training in which respondents participated, from seven specific types of training mentioned to respondents.

**Two-tailed t-test statistically significant at the .01 level.

****Two-tailed F-test statistically significant at the .0001 level.

parents suggest." The test was scored such that 30 represented the most mature career orientation and 0 the least mature.

As shown in Table 3.16, the average score on the Career Maturity inventory was 19.0.[16] Actual scores ranged between 6 and 29. As might be expected, younger girls scored significantly lower on this inventory than older girls. In terms of ethnicity, the Hispanic teens had the lowest career maturity scores. Hispanic teens had lower scores than black teens, even after age was statistically controlled ($F = 5.6$, $df = 1, 490$, $p < .05$). Career Maturity scores were not related to the parenting variable.

Although the overall test score on the career maturity inventory is the measure of primary interest in terms of measuring change between the baseline and follow-up surveys, an examination of responses to several typical items is useful in illustrating the current level of maturity of this population. Table 3.17 presents the actual responses to ten of the thirty items. As this table indicates, a sizeable percentage of the respondents expressed some frustration about occupational choice (#1), some feelings of helplessness (#6), and a lack of realism (#3, 10), which many acknowledged (#9). It is interesting to note that the majority of respondents stated that they prefer work to play (#7).

The second section of the ETS battery used in the survey was a 17-item test of knowledge concerning employability information. The test measured such areas as ability to complete a job application and understanding of a want ad. Each correct item added one point to a person's total score, so that the possible range of scores was from 0 to 17, with higher scores indicating greater knowledge.

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[16] The 30-item test is a subset of the 50 items in John Crites' Career Maturity Inventory, which has been used widely. In the present sample, respondents got an average of 63.3 percent of the total maximum maturity score. This compares with 60.5 percent (for the 50-item test) for a sample of 9th grade Mexican Americans in New Mexico, 64.8 percent for a sample of 9th grade black students in Pennsylvania, and 73.0 percent for the standardization sample (Crites, 1978). Thus our respondents' scores are comparable to those of other young minority samples.

TABLE 3.16

MEAN CAREER MATURITY INVENTORY SCORES OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY AGE, PARENTING STATUS, AND ETHNICITY

Group	Mean	Number in Group
Age Group**		
15 Years Old or Younger	18.0	159
16-17 Years Old	19.4	348
Parenting Group		
Pregnant Teens	18.8	254
Mothers	19.3	252
Ethnic Group****		
Hispanics	18.0[a]	159
Blacks	19.3	334
Whites	23.8	11
All Respondents	19.0	504

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The Career Maturity Inventory consists of 30 items, each of which was assigned 1 point if it was answered correctly. Higher scores reflect greater career maturity.

[a] Even when the white teens were excluded from this analysis, the scores of the Hispanic teens, particularly those of the Puerto Rican girls, were significantly lower than those of the blacks (Puerto Rican mean = 17.4; Chicana mean = 18.6); (p<.01).

**Two-tailed t-test statistically significant at the .01 level.

****Two-tailed F-test statistically significant at the .0001 level.

TABLE 3.17

RESPONSES TO SELECTED ITEMS ON THE CAREER MATURITY INVENTORY BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Career Maturity Inventory Item	Percentage of Teens with Given Response		
	True	False	Total
1. Everyone seems to tell me something different; as a result I don't know which kind of work to choose.........(False)[a]	49.5	50.5	100.0 (N=509)
2. It doesn't matter which job you choose as long as it pays well...(False)	44.8	55.2	100.0 (N=509)
3. It's probably just as easy to be successful in one occupation as it is in another....................(False)	59.3	40.7	100.0 (N=508)
4. I keep changing my occupational choice............(False)	47.2	52.8	100.0 (N=508)
5. I'm not going to worry about choosing an occupation until I'm out of school...........................(False)	36.7	63.3	100.0 (N=509)
6. You get into an occupation mostly by chance.......(False)	37.2	62.8	100.0 (N=505)
7. I'd rather work than play.........................(True)	89.8	10.2	100.0 (N=509)
8. I don't want my parents to tell me which occupation I should choose..................................(True)	72.4	27.6	100.0 (N=508)
9. I don't know whether my occupational plans are realistic..(False)	46.0	54.0	100.0 (N=504)
10. You should choose a job in which you can someday become famous..(False)	51.5	48.5	100.0 (N=507)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: These 10 items were selected from the 30 presented to respondents. This inventory, developed by John Crites, is a sub-test in a battery of employment-related tests for teenagers prepared by the Educational Testing Service.

The totals may not add to 100.0 due to rounding error.

[a] The response in parentheses indicates the response scored as correct in terms of career maturity.

Table 3.18 summarizes the analyses of the Employability Test scores. The average score was 10.7,[17] with a standard deviation of 3.5. Actual scores ran the full range from 0 to 17. Again, younger girls scored lower on the test than older girls. Test scores were not related to parity. Hispanic girls scored significantly lower than other teens on this test; ethnic differences remained even when age was controlled ($F = 6.8$, $df = 1, 490$, $p < .01$). This finding may partially reflect a language problem: although the test questions themselves were translated into Spanish, the information on the want ads and job applications was in English.[18]

Another short test was included that measured the respondents' knowledge about the training requirements for various occupations: accountant, nurse, lawyer, social worker, and auto mechanic. Responses were scored on a four point scale for each occupation: 3 points if the respondent knew the exact requirements, 2 points if she had some general sense about training needs, 1 point if she had some knowledge about what the job entailed or what skills were required, and 0 points if she had no knowledge about the job. Scores therefore could theoretically range from a low of 0 to a high of 15.[19]

Table 3.19 presents the results of the analyses on the training requirements test. The average score was 6.2, indicating a very low level of understanding about the training required for the five selected occupations. Actual scores ranged from 0 to 15, with a standard deviation

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[17] This mean is lower than the mean of 11.7 reported in the Technical Manual for PAYES (Program for Assessing Youth Employment Skills). The standardization sample on which this mean was based consisted of 1,331 students and enrollees in employment programs, whose average age (18) was two years older than the average age of girls in the present sample.

[18] The information in the want ads and job applications was not translated because the test is designed to measure a person's employability skills within our society. That is, Hispanic teens seeking a job here would need to be able to read ads and applications in English rather than Spanish.

[19] This measure was constructed for the baseline survey. Therefore, there are no norms with which to compare our results.

TABLE 3.18

MEAN EMPLOYABILITY KNOWLEDGE TEST SCORES OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY AGE, PARENTING STATUS, AND ETHNICITY

Group	Mean	Number in Group
Age Group*		
15 Years Old or Younger	10.2	158
16-17 Years Old	10.9	349
Parenting Group		
Pregnant Teens	10.6	254
Mothers	10.8	252
Ethnic Group**		
Hispanics	10.0[a]	160
Blacks	11.0	333
Whites	11.5	11
All Respondents	10.7	507

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The Employability Knowledge Test consists of 17 items, each of which was assigned 1 point if it was answered correctly. Higher scores reflect greater knowledge.

[a] When the whites were excluded from this analysis, Hispanics still scored significantly lower than black teens. Puerto Ricans scored lower (9.7) than Chicanas (10.2); ($p < .01$).

*Two-tailed t-test statistically significant at the .05 level.

**Two-tailed F-test statistically significant at the .01 level.

TABLE 3.19

MEAN SCORES ON TRAINING REQUIREMENTS TEST OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY AGE, PARENTING STATUS, AND ETHNICITY

Group	Mean	Number in Group
Age Group*		
15 Years Old or Younger	5.6	155
16-17 Years Old	6.4	341
Parenting Group		
Pregnant Teens	6.1	253
Mothers	6.2	243
Ethnic Group		
Hispanics	5.7	159
Blacks	6.3	323
Whites	7.0	11
All Respondents	6.2	496

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The Training Requirements test consisted of 5 items, each of which was assigned a score of 0, 1, 2, or 3 depending on the respondent's knowledge of training requirements for 5 occupations. Higher scores reflect more knowledge.

*Two-tailed t-test statistically significant at the .05 level.

of 3.9. Neither parity nor ethnicity were related to knowledge about training needs. Consistent with other results, older teens were somewhat more knowledgeable than younger teens about occupational training.

The respondents were best informed about the training requirements to become a nurse, and least informed about how to become an auto mechanic (Table 3.20). Few respondents were aware of how to prepare to be a social worker. The majority of girls (60.1 percent) scored no points on this question. Two frequent responses were, "Just know how to get along with people" and "Know how to fill out forms."

Respondents were also asked, for each of the five occupations, whether they would like to work in that field. These responses are also presented in Table 3.20. Respondents were most interested in jobs about which, as a group, they were best informed, although interest and knowledge did not always go hand in hand. The two occupations in which there was greatest interest were the two that are traditionally filled by women (nurse and social worker).

Attitudes toward nontraditional fields were measured more directly by a five-item Likert scale that included items such as "No real woman would want to do men's work, like construction or auto repair." High scores (maximum of 20) reflected positive attitudes toward nontraditional work, while low scores (minimum of 5) reflected negative attitudes.

The mean score on this attitude scale was 13.9, indicating moderately positive attitudes toward women entering nontraditional fields (i.e., the average score was above the "neutral" midpoint of 12.5) as shown in Table 3.21.[20] The scores ranged from a low of 6 to a high of 20, with a standard deviation of 2.5. Attitudes toward nontraditional careers were not related to age, parity or ethnicity.

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[20] The fact that attitudes were favorable, while relatively few respondents indicated a desire to pursue a nontraditional job (accountant, lawyer, auto mechanic) themselves suggests that such attitudes have not translated themselves into a wider view of personal options.

TABLE 3.20

KNOWLEDGE OF AND ATTITUDES TOWARD FIVE SELECTED OCCUPATIONS OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Occupation	Percentage of Teens Knowing Exact Training Requirements[a]	Percentage of Teens Expressing Personal Interest in the Occupation[b]
Accountant	22.4	17.3
Nurse	47.5	37.2
Lawyer	26.1	16.1
Social Worker	22.4	23.2
Auto Mechanic	10.3	6.0

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: These data are based on the responses from 514 respondents.

[a] For each occupation, respondents were asked: "What kind of school or special training (if any) does a person need to become (an accountant)?"

[b] For each occupation, respondents were asked: "How would you feel about being (an accountant) yourself? Would you say you would like to be (an accountant), wouldn't mind being (an accountant), or would dislike being (an accountant)?" Percentages reflect those indicating they would like to be (an accountant).

TABLE 3.21

MEAN SCORES ON NONTRADITIONAL EMPLOYMENT SCALE OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY AGE, PARENTING STATUS, AND ETHNICITY

Group	Mean	Number in Group
Age Group		
15 Years Old or Younger	13.7	160
16-17 Years Old	13.9	347
Parenting Group		
Pregnant Teens	14.0	253
Mothers	13.8	254
Ethnic Group		
Hispanics	13.6	158
Blacks	14.0	335
Whites	13.9	11
All Respondents	13.9	507

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The nontraditional employment scale consisted of 5 Likert-type items, scored on a 4-point scale. Higher scores reflect more favorable attitudes toward nontraditional jobs for women.

None of the group differences was statistically significant.

In addition to including job readiness as an "enabling factor" within the occupational realm, we also examined occupational goals and aspirations. Again, the underlying rationale is that people with low aspirations may be insufficiently motivated to make investments in the employment arena.

Occupational aspirations were examined in response to the open-ended questions concerning the respondents' future hopes and dreams. Nearly half (42.3 percent) of the sample indicated that a bright future would include having a good job. Interest in having a good job was not related to age, parity, or ethnicity. In addition, 25.8 percent of the sample indicated they not only wanted a job, but specified which occupation they would like to pursue. Older teens (28.8 percent) were more likely than those under sixteen (19.4 percent) to have a specific occupational goal in mind ($\chi^2 = 4.6$, df = 1, $p < .05$). Hispanic teens (19.3 percent) were somewhat less likely than other teens (28 percent) to have a specific career goal ($\chi^2 = 5.3$, df = 2, $p < .07$). Although age accounted for some of this ethnic difference, even among the 16 and 17 year old teens more blacks (31.2 percent) than Hispanics (17.8 percent) had a specific occupational goal. The ten most common responses to the question of what the respondents' hopes and dreams for the future were are summarized in Table 3.22.

Unlike the mothers' concern about the educational attainment of their children, comparatively few respondents (23.7 percent) indicated as a primary desire for their children that they have a good job. However, as shown in Table 3.23, their children's occupational security was nevertheless one of the most commonly cited areas of interest expressed by these young women regarding their children's future.

Occupational goals were explored in another question that asked respondents to predict what they would be doing in five years. In response to this question, which was more slanted toward employment than the question on future hopes by virtue of its placement in the interview, 47.1 percent of the sample mentioned some specific occupation that they thought they would be pursuing. The most commonly mentioned occupations were secretary (8.2 percent), nurse (9.1 percent), beautician (2.7 percent), and

TABLE 3.22

MOST COMMONLY CITED PERSONAL GOALS OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Response Category for Personal Goals	Percentage Citing Goal in First Mention	Percentage Citing Goal in Second Mention	Percentage Citing Goal in Third Mention	Total Percentage of Teens Citing Category as a Goal
Have a Job	19.0	18.5	14.3	43.2
Have a Nice Home; My Own Home	13.3	18.8	14.6	37.8
Be Married; Have a Nice Marriage	12.1	11.3	13.9	29.9
Have Some Specific Job	15.2	8.5	5.0	25.3
Be a Good Mother; Take Good Care of My Child(ren)	4.2	8.0	10.3	17.0
Have Lots of Money; Nice Things	5.7	5.2	6.3	13.9
Be Happy; Have a Happy Life	6.3	1.4	3.3	9.5
Finish School	6.1	2.8	1.3	9.3
Have Happiness/Success For My Child(ren)	1.0	3.5	7.0	8.1
Have a Nice Car	.8	4.2	4.0	6.7
All Other Goals Cited[a]	16.2	17.8	20.2	43.3
Total	100.0	100.0	100.0	--[b]
Total Number of Goals Expressed by Teens	505	426	302	

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: A total of 505 respondents cited from 1 to 3 personal goals: 505 cited one goal (first mention); 426 cited a second goal (second mention) and 302 cited a third goal (third mention). The last column shows the percentage of the 505 teens who specified a given category as one of their goals.

The totals may not add to 100.0 percent due to rounding error.

[a] Other goals mentioned included staying healthy; staying close to family and relatives; traveling; having lots of kids; and moving to a different city or state.

[b] The percentages in the last column do not add to 100.0 percent because respondents could mention more than one goal. On average, respondents cited 2.44 goals.

TABLE 3.23

MOST COMMONLY CITED GOALS FOR THE CHILDREN OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Response Category for Goals for Children	Percentage Citing Goal in First Mention	Percentage Citing Goal in Second Mention	Percentage Citing Goal in Third Mention	Total Percentage of Teens Citing Category as a Goal
Get A Good Education; Finish School	45.3	12.7	5.7	58.2
Have a Job	2.2	20.0	12.6	24.2
Go to College	12.5	7.1	2.6	19.4
Do Something Meaningful; Be Successful	4.4	12.2	9.1	18.4
Do What S/He Wants with His/Her life	5.5	7.3	9.6	15.8
Be Happy; Have a Happy Life	3.0	4.9	7.0	10.1
Be a Good Person	2.4	6.1	3.0	8.7
Keep Out of Trouble	1.0	3.9	3.9	6.9
Live a Good Life	4.0	1.7	2.6	6.5
Be Married	.8	2.2	7.4	5.9
All Other Goals Cited[a]	19.0	22.0	36.5	53.5
Total	100.0	100.0	100.0	--[b]
Total Number of Goals Expressed By Teens	505	410	230	

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: A total of 505 respondents cited from 1 to 3 goals for their children: 505 cited one goal (first mention); 410 cited a second goal (second mention); and 230 cited a third goal (third mention). The last column shows the percentage of the 505 teens who specified a given category as one of the goals.

The totals may not add to 100.0 percent due to rounding error.

[a] Other goals mentioned included staying healthy; having children; avoiding an early pregnancy; and staying off welfare.

[b] The percentages in the last column do not add to 100.0 percent because respondents could mention more than one goal. On average, respondents cited 2.27 goals.

computer operator (2.5 percent). A few respondents said that in five years they would be pursuing a high-status career, an accomplishment that would be clearly beyond their attainment within a five-year time frame. For example, respondents mentioned being a lawyer (N=5), mathematician (N=1), teacher (N=8), dentist (N=1), doctor (N=1), and accountant (N=9). Others, possibly equally unrealistic, predicted occupatings construed as glamorous, such as a model (N=7), actress (N=2), or stewardess (N=2).

In response to the same question, an additional 26.3 percent of the sample indicated that they thought they would be working in five years, although they did not state what type of work they would be doing. Thus, nearly three-fourths of the sample felt they would be working in five years, and many others (16.5 percent) felt they would still be in school.

Given this orientation toward employment, it is not too surprising that the large majority of respondents (91.9 percent) felt they would rather work than be on welfare. Only 3.4 percent of the sample thought it was just as good to go on welfare as work, and the remaining 4.7 percent said they didn't know which was preferable. When asked why it would be preferable to work, the respondents were most likely to say that they could make more money by working (26.7 percent), or that they preferred to be independent (18.1 percent). Other responses indicative of personal ambition included statements that welfare is for lazy people (9.5 percent), that being on welfare is boring (7.0 percent), that welfare is only for the very needy (4.1 percent), and that one can't learn anything by being on welfare (2.5 percent). Hispanic teens (83.2 percent) were less likely than white (100 percent) or black (95.8 percent) teens to indicate that work is preferable to welfare ($\chi^2 = 24.1$, df = 4, $p < .0001$). Among those who preferred work to welfare, Hispanics were least likely to say they preferred being independent, and most likely to cite the inadequacy of the money on welfare as their reason for preferring to work (see Table 3.24).

In summary, the data concerning the employment-related "enabling factors" further support the view that these teens have a generally positive orientation toward the world of work. Having a job was a top priority among these respondents, and only a handful of girls expressed an interest in welfare as a substitute for employment.

TABLE 3.24

REASONS THAT WORK IS PREFERABLE TO WELFARE AS CITED BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY ETHNICITY

	Percentage Distribution of Teens, by Ethnicity			
Reasons Cited	Hispanic	Black	White	All Ethnic Groups
Welfare is Inadequate	38.4	21.2	27.3	26.7
Respondent Wants to Achieve A Lot in Life	2.2	2.0	0.0	2.1
Welfare Can't be Depended Upon	6.5	6.5	0.0	6.3
Respondent Wants to be Independent	11.6	20.8	18.2	18.1
Work is Just Preferable	8.0	16.0	9.1	13.3
Welfare is for Lazy People	7.2	10.6	9.1	9.5
Welfare is for Needier People than Respondents	4.3	3.1	27.3	4.1
Respondent Would be Ashamed to be on Welfare if She Could Work	0.0	.7	0.0	.5
One Can't Learn by Being on Welfare	2.2	2.7	0.0	2.5
Welfare is Too Much of a Hassle	5.1	5.5	0.0	5.2
Respondent Would be Bored Being on Welfare and Staying Home	5.1	7.8	9.1	7.0
All Other Reasons Cited	9.6	2.8	0.0	4.7
Total	100.0	100.0	100.0	100.0
Total Number of Respondents	125	289	11	425[a]

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

A two-tailed chi-square test for this distribution is statistically significant at the .001 level.

[a] The number of respondents in this table is low for the following reasons: 17 respondents said work was not preferable to welfare; 27 respondents did not know why (or whether) they felt work was preferable to welfare; and 45 respondents did not respond to this question.

The findings with respect to job readiness variables suggest that there is considerable room for Project Redirection to have an impact. Nevertheless, the girls in this sample performed at levels that are about average for young minority teens.

D. Findings Relating to Fertility and Family Planning

Young mothers can make very substantial investments in their own futures by avoiding an early repeat pregnancy. In fact, however, many teens are involved in second or third pregnancies. For example, of the 570,609 births to teenagers in 1977, over one-fifth (21.1 percent) were second or higher order births (Jones and Placek, 1979).

The problems of teenage parenthood are exacerbated by additional closely-spaced pregnancies. Among those aged 19 or younger, for example, the risk of neonatal mortality has been found to increase with parity, from 6 percent for the first birth to 7.1 percent for the second and 14.3 percent for the third births (Menken, 1975). The risk of prematurity has also been demonstrated to rise, from 11.7 percent in first births to 27.2 percent in subsequent births (Jekel *et al*, 1975). For the young mothers themselves, higher-order births are associated with serious negative consequences. In terms of educational impact, each successive pregnancy increases the likelihood of dropping out of school (Furstenberg, 1976). Foltz *et al* (1972) found that girls with repeat pregnancies were substantially less likely to enroll in a special program for teen parents than girls with one baby. Higher-order births have a similar effect on work experience. Furstenberg (1976) reported, for example, that five years after an index pregnancy, 43 percent of the teen mothers with one child were employed, compared with 10 percent of the multiparous women.

Of course, unraveling the nature of the relationship between repeat pregnancy and other life outcomes is, as in the case of so many behavioral variables, problematic. Above, it was noted that multiparous teens are more likely to drop out of school than are primaparous teens. Jekel *et al* (1973), however, found that girls who stayed in school after their first birth were less likely than non-returnees to experience a repeat pregnancy at 15 months and 26 months postpartum. These same investigators noted that 76 percent of the girls in school, compared with only 32 percent of the dropouts were using birth control after childbirth. Thus, it is left to speculation whether birth control use and higher-order pregnancies affect educational attainment, or whether some factor that influences the girls' school attendance (such as motivation) also affects birth control practice.[21]

Not surprisingly, the factors that have been found to be associated with contraceptive utilization are typically those correlated with a repeat pregnancy. For example, older teens are more likely than younger ones to practice birth control (Zelnik and Kantner, 1978). With respect to a repeat pregnancy, Broman (1978) found that the interval between delivery of a first baby and a new pregnancy was substantially smaller for teens aged 12 to 15 (3.5 months among whites) than for those aged 16 and 17 (6.8 months for whites). Marriage has been found to have a negative impact on both birth control use and higher-order births. Furstenberg (1976), for example, found that 69 percent of the single teens in his sample, compared with 51 percent of the married teens, were using birth control 12 months postpartum. Klerman and Jekel (1973) meanwhile reported that 67 percent of the married teens, and 39 percent of the single teens in their sample had a subsequent pregnancy 26 months after the index pregnancy.

In the area of family planning and fertility, we again examined both direct investment behaviors and factors presumed to enable or facilitate investments. In the section below we examine pregnancy history and contraceptive utilization. The use of birth control was considered an investment behavior because it requires teens to consciously expend time, effort, and (perhaps) money in an activity that augments their future resources. The second subsection presents the data with respect to contraceptive enablers: knowledge about and access to birth control.

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[21] Given the longitudinal nature of this study, we hope to be able to shed some light on this question after the follow-up data are collected.

1. Repeat Pregnancy and Contraceptive Utilization

In our sample of respondents, the incidence of higher-order births was relatively low at the time of the baseline interview. A total of 51 girls (9.9 percent) either had two or more children or were pregnant with a second or third child. The fact that the percentage of teens with repeat births is not as high in this sample as the overall national incidence among teenagers (20.1 percent) could be related to the fact that multiparous teens are apparently less likely to be in special teen parent programs than primaparous teens (cf. Foltz, et al, 1972).

While under 10 percent of the sample were in a repeat-birth situation, approximately one out of four girls (23.6 percent) had been pregnant more than once, as shown in Table 3.25. Of the 121 girls with repeat pregnancies, 9.9 percent had had three or more pregnancies at the time of the baseline interviews. Younger girls (11.9 percent) were less likely than the 16-17 year old girls (28.8 percent) to have been pregnant more than once ($\chi^2 = 17.7$, df = 3, $p <.0005$). Of course, by the time this same group of young girls reach 16 or 17, one would expect them to have a higher rate of repeat pregnancy. There was no significant relationship between ethnicity and number of pregnancies.

Pregnancies that did not result in a currently living infant ended in one of three ways: the death of the child, a miscarriage, or an abortion. Seven girls (1.4 percent) reported having given birth to a child who later died. Another 6.0 percent said that they had had a miscarriage. Miscarriages, like repeat pregnancies, were more common among the 16-17 year olds than among the younger girls. Forty-two teens (8.2 percent) had had an abortion; two of these girls had had two abortions. Again, the 15 year olds and younger girls were less likely to have ended a pregnancy by abortion than the older girls (3.1 percent versus 10.5 percent).

In sum, then, a fairly sizeable percentage of these young women had already been pregnant two or more times. By the time they all pass their eighteenth birthdays, it seems reasonable to surmise that nearly half or even more may experience a repeat pregnancy. In order to avoid subsequent

TABLE 3.25

SELECTED PREGNANCY AND PARENTING OUTCOMES OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY AGE GROUP

Selected Experience	Percentage of Teens with Given Experience, by Age Group: 15 Years Old or Younger	16-17 Years Old	All Respondents
Mother of More Than One Child at Baseline	1.9	8.2	6.2 **
Mother and Pregnant at Baseline	3.1	4.0	3.7
Girls Having Had More Than One Pregnancy	11.9	28.8	23.6 ***
Girls Having Had a Miscarriage	2.5	7.6	6.1 *
Girls Having Had an Abortion	3.1	10.5	8.2 **
Girls With a Child Who Died	1.9	1.1	1.4

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The percentages do not add to 100.0 percent because more than one category might be applicable (e.g. Girls with an abortion and a miscarriage).

The percentages in this table are based on the responses from 513 respondents.

*A two-tailed chi-square test for this distribution is statistically significant at the .05 level.

**A two-tailed chi-square test for this distribution is statistically significant at the .01 level.

***A-two-tailed chi-square test for this distribution is statistically significant at the .001 level.

pregnancies, they will either have to abstain from sexual activity or they will need to protect themselves by using contraceptives.

The majority of teens in our sample (58.3 percent) reported that they were not currently having sexual relations with anyone. Pregnant girls (both those with and without children) were less likely to report current sexual activity (34.1 percent) than the nonpregnant mothers (51.3 percent). Most of the girls who reported that they were sexually active said that they had intercourse at least once a week (73 percent). Even among those girls who self-defined themselves as not currently sexually active, a sizeable percentage (33.1 percent) reported having had a sexual contact within the previous three-month period. Thus it appears that many of these girls could be exposing themselves to the risk of a repeat pregnancy, especially since many of the pregnant girls may resume sexual relations at some point after their delivery.

Slightly over half of the sample (53.7 percent) said that they (or their partners) had at least once used some birth control method to prevent pregnancy.[22] Among the currently active teens who were exposed to a pregnancy risk (i.e., the self-defined sexually active teens who were not already pregnant), 79.8 percent[23] said they or their partners were currently using contraception. Even among this group of current users, contraception was not uniformly consistent nor effective. For example, among the non-pregnant girls who were sexually active and users of birth control, 23.9 percent said they had used no contraceptives during their last intercourse. In fact, 40.5 percent of the current users admitted they did not practice birth control all of the time. Of the 101 girls who said their contraceptive practice was irregular, half (49.5 percent) said they used birth control less than 50 percent of the time.

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[22] This figure is somewhat lower than that reported in the 1979 national probability survey of girls aged 15 to 19. Zelnik and Kantner (1980) found that 73.4 percent of their sexually active respondents (64.1 percent among the black girls) had ever used some form of birth control. The rate for the black girls in our sample (61.4 percent) is, however, comparable.

[23] These figures may actually underestimate the percentage of teens who take some action to prevent pregnancy. Our experience in another study has been that teens do not consider rhythm and withdrawal as forms of birth control. While these two non-device methods of contraception are not very effective, they do reduce the risk of pregnancy.

There were some substantial group differences regarding the use of birth control. Pregnant teens were less likely to have ever practiced birth control (32.8 percent) than were the parents (74.4 percent) or, especially, the non-pregnant parents (75.7 percent); ($\chi^2 = 87.8$, df = 1, $p < .0001$). Black teens (61.4 percent) reported having ever used a birth control method more frequently than Hispanic (38.5 percent) teens ($\chi^2 = 22.0$, df = 1, $p < .0001$). This ethnic difference emerged among both the 15-and-under group (55.1 percent versus 32.8 percent) and the 16 and 17-year-old age group (70.2 percent versus 53.3 percent). Overall, younger girls (42.5 percent) had significantly less contraceptive experience than older girls (58.8 percent); ($\chi^2 = 11.1$, df = 1, $p < .001$).

The most commonly mentioned form of birth control ever practiced was the pill, which two out of five teens had used, as shown in Table 3.25. A surprisingly small percentage of girls said their partners had used condoms.[24] The type of method used was fairly consistent across ethnic, age and parity groups. Interestingly, the level of satisfaction for any given method was never particularly high. Pill users were most satisfied with their method. Nevertheless, nearly 4 out of 10 girls who had been on the pill indicated dissatisfaction with this method.

For the most part, these girls did not tend to experiment with alternative birth control methods. Among those girls who had used some form of birth control, fewer than half had tried more than one method.

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[24] In the Zelnik and Kantner (1980) survey, the methods most recently used by the highest percentage of respondents were the pill (40.6 percent for the total sample, 50.6 percent among blacks) and condom (23.3 percent for the sample, 24.2 percent for the blacks). Comparably low percentages of teens in their survey and in our sample used the diaphragm (3.5 percent vs. 2.0 percent).

TABLE 3.26

USE OF AND SATISFACTION WITH VARIOUS FORMS OF BIRTH CONTROL BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Method of Birth Control	Percentage Having Used the Method	Percentage of Users Reporting Satisfaction with Method
Condoms	13.1	38.3
Withdrawal	3.1	44.5
Rhythm	.1	60.0
Pill	40.7	63.4
Diaphragm	2.0	58.3
IUD	5.3	55.2
Foams, Jellies	6.5	54.3
Total Number of Respondents	514	--[a]

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: Use of a method includes both personal use (e.g. pill), or use by a partner (e.g. condom).

Percents do not add to 100.0 because respondents could have used more than one method of birth control.

[a] No total is presented with regard to satisfaction, because the number of users varied from method to method.

This tendency to stick to one method was fairly consistent across the various subgroups.[25]

Non-users of birth control gave a variety of reasons for their failure to have tried any. Among the most commonly cited reasons were anxiety about the side effects of birth control (17.3 percent); a desire to get pregnant (11.3 percent); dislike of any form of birth control (9.1 percent); the belief that using birth control is too much trouble (6.1 percent); and unfamiliarity with birth control (6.1 percent).

In summary, a substantial proportion of the sample was at risk to a new pregnancy. Many had never practiced birth control, and among those who did, use tended not to be regular. Although the methods most frequently used by these girls or their partners are effective forms of contraception (condoms and the pill), the girls admitted that their use was not always consistent. It seems likely that some of the girls who think they are practicing effective and consistent birth control are in fact less careful and conscientious in practice than they reported.

2. Contraceptive Knowledge and Access

In order to make well-informed decisions about birth control, teenagers need to have some basic understanding about contraceptive options. They also need to feel that birth control is accessible to them. A programmatic objective of Project Redirection is to provide contraceptive information and counseling to the teen mothers and pregnant teens so that repeat pregnancy can be avoided. As we have seen, effective and consistent contraceptive utilization at the time of the baseline interview was not widespread. The interviews also gathered information about the respondents' level of knowledge about birth control and their perceived ease of access to various contraceptives.

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[25] In a study of contraceptive decision-making in young couples, respondents indicated having used, on average, 2.3 different methods (Polit, Kahn, and Enman, 1981).

Our instrument included a test of sixteen true-false questions, utilized in the Kantner and Zelnik (1972) survey, designed to measure the respondents' knowledge about contraceptive methods and risk of pregnancy. Selected questions, and the rate of correct responses, are presented in Table 3.27. In scoring this test each correct response was assigned one point, and then all points were summed. Thus the absolute range of possible scores was 0 to 16. In fact, the actual scores spanned the entire range with one respondent having no correct responses, and three respondents achieving perfect scores (N=512). The overall mean was 9.0. In other words, the sample was able to correctly answer, on average, only 56 percent of the questions. A high percentage of respondents admitted their lack of knowledge by giving "don't know" responses to many of the questions.

Birth control knowledge scores varied significantly by ethnicity, age and parity. The greatest diversity was among ethnic groups. The mean score for Hispanics was 8.0 compared to 9.5 for blacks (F = 29.0, df = 1, 496, p <.0001). Puerto Rican teens had lower mean scores ($\bar{X}$ = 7.2) than the Chicanas ($\bar{X}$ = 8.6). It should be remembered, of course, that our Hispanic sample was not only predominantly Catholic, which is potentially a contributing factor to their lower scores, but also younger than the black subgroup. However, the ethnic difference persisted even when the teens' age was controlled (F = 23.7, df = 1, 495, p <.0001). In terms of the two age groups we found that those 15 and younger averaged 8.4 points, compared to a mean of 9.3 for those 16 and above (F = 10.4, df = 1, 510, p <.001).

The scores also varied according to the respondents' current parenting situation. The highest mean was scored by the mothers, whose mean score was 9.5 compared with 9.0 for pregnant mothers (F = 4.8, df = 2, 509, p <.01). This finding can be explained as both a matter of adolescent psychology and social policy. Given the number of adolescents who believe that they are immune to pregnancy by virtue of fate, justice, or folklore, one would expect a surge in interest in contraception following the delivery of an "unexpected" child. Additionally, we know that the medical personnel in many communities are particularly diligent about imparting contraceptive information and supplies to young women as they leave the maternity service.

TABLE 3.27

RESPONSES TO SELECTED ITEMS OF THE BIRTH CONTROL KNOWLEDGE INVENTORY BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Birth Control Knowledge Inventory Item	Percentage of Teens with Given Responses			
	Agree	Disagree	Don't Know	Total
A sexually active girl can become pregnant if she forgets to take her birth control pills for several days in a row during the time she is supposed to be taking them. (Agree)[a]	90.9	6.4	2.7	100.0 (N=514)
Condoms can be obtained only from a doctor. (Disagree)	23.0	62.3	14.8	100.0 (N=514)
The IUD must be inserted before every act of intercourse. (Disagree)	37.5	40.2	22.2	100.0 (N=510)
The use of a diaphragm has very few harmful effects. (Agree)	32.1	25.3	42.4	100.0 (N=513)
Withdrawal or pulling out can help prevent VD. (Disagree)	11.5	53.7	34.8	100.0 (N=514)
An abortion can be done safely and easily by a doctor during the first 12 weeks of pregnancy. (Agree)	69.6	19.8	10.3	100.0 (N=513)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: These six items were selected from the 16 presented to the respondents. All items were from a test of birth control knowledge used in Kantner and Zelnik's (1972) survey of adolescents' sexual and contraceptive experiences.

The totals may not add to 100.0 percent due to rounding error.

[a] The response in parentheses indicates the correct response.

Although these subgroup differences were significant, it is important to keep in mind that the scores were in general fairly low. Fully 43 percent of the respondents answered at least half the questions incorrectly and 86.7 percent of the young women could correctly answer no more than three out of four. Given that the questions involved fairly basic information, this ignorance could certainly impede a person's ability to prevent pregnancy, even if she were interested in that goal.

The areas of relative knowledge and ignorance are important, although not surprising. The four questions that were most frequently answered correctly were related to the pill. At the top of the list, 90.9 percent of the young women agreed with the statement, "A sexually active girl can become pregnant if she forgets to take her birth control pills for several days in a row during the time she is supposed to take them." The other pill-related questions concerned the need for a prescription (76.7 percent correct), possible health problems or harmful effects (73 percent correct) and the possibility of pills preventing VD (70.6 percent correct).

Our respondents were, themselves, most aware of their ignorance about the diaphragm. For instance, when given the statement "The use of a diaphragm has very few harmful effects," 42.4 percent said they did not know. Almost that many (41 percent) responded "don't know" to the statement, "To be most effective, a diaphragm should not be removed for at least 6 hours after intercourse."

In summary, the responses to questions designed to test contraceptive knowledge suggest that these girls may not have a thorough enough understanding to make an informed choice about which contraceptive method to use and how to use it, even if and when they want to.

As noted earlier, access to birth control is another obvious prerequisite for its use. Given current federal and state legislation on this matter it can be assumed that, theoretically at least, all methods are available to this population. Theoretical availability, however, is not enough. Adolescents must also be able to financially afford birth control, know where and how to get it, and feel able to take those steps. For this population, whose financial resources are minimal, the costs of birth control--doctor's visits, transportation, pills, foam, etc.--may appear prohibitive. Furthermore, the embarrassment and intimidation that prevent adolescents from approaching the medical personnel or even drugstore clerks who stand between them and contraception is well documented (URSA, 1976; Miller, 1976; Goldsmith et al, 1971).

Respondents were asked to indicate how difficult they thought it would be to get various forms of birth control. This question was asked about condoms, pills, diaphragm, IUD and foam. A total "Ease of Access" score was calculated by assigning one point for every response of impossible, two points for each response of difficult, and three points for each response of easy. Thus the absolute range was from a low of 5, for someone who felt all methods would be impossible to get, to a high of 15, for someone who felt all methods named would be easy to obtain.

Although the actual responses again spanned the entire possible range, for the most part the scores were high, indicating a general sense of availability. Thus, while 7 respondents indicated they felt all methods would be impossible to obtain, 88 respondents rated all five methods as easy. The method deemed most easily accessible was the pill. (See Table 3.28). On the one hand, common sense might contradict this finding since the pill does require medical supervision and a monthly expenditure. On the other hand, this was the most widely used of the methods, and there is a certain amount of street traffic in birth control pills that allows some people to bypass the medical establishment. Overall, we assume this perceived ease of access relates to the respondents' familiarity with and acceptance of the pill. Conversely, the diaphragm was seen as the least accessible method. Again, the data indicated the respondents' lack of familiarity with the diaphragm, as evidenced by 27.1 percent of the respondents saying they did not know how easy or difficult it would be to obtain.

The most noticeable variation on the "Ease of Access" scale was among ethnic groups. The mean score for Hispanics was 11.7 compared with 12.4 for blacks ($F = 4.7$, $df = 1, 317$, $p < .05$). When age was controlled by

TABLE 3.28

PERCEIVED EASE OF ACCESS TO VARIOUS CONTRACEPTIVE METHODS BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Birth Control Methods	Percentage of Teens with Given Responses				
	Impossible to Obtain	Difficult to Obtain	Easy to Obtain	Don't Know	Total
Rubbers (Condoms)	9.1	13.0	67.5	10.3	100.0 (N=514)
Birth Control Pills	6.6	16.9	73.3	3.1	100.0 (N=514)
Diaphragm	13.6	28.4	30.9	27.1	100.0 (N=514)
IUD	18.5	26.5	34.6	20.4	100.0 (N=514)
Contraceptive Foam	10.1	16.5	55.8	17.5	100.0 (N=514)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The wording of the question was: "For the following types of birth control, would you say that it would be impossible, difficult, or easy for you or your boyfriend to obtain?"

The totals may not add to 100.0 percent due to rounding error.

analysis of covariance, the ethnic difference was marginally significant ($F = 3.6$, $df = 1, 316$, $p = .06$). As might be expected, older teens felt they had better access to birth control than younger ones: the mean score for the 15 year olds and younger was 11.8, compared with a mean of 12.5 for those 16 and older ($F = 4.1$, $df = 1, 327$, $p < .05$). No significant difference was found on the basis of parity.

These two factors, knowledge and access to contraception, may be considered enabling factors with which a girl approaches her childbearing future. On the positive side, our sample felt that birth control is available to them. Only 1.4 percent believed that all methods would be impossible to obtain, while 76.3 percent felt that at least one method was easy to obtain. Their knowledge of contraception was, however, not extensive. In both knowledge and perceived accessibility, this sample was extremely pill-oriented. Yet they were also highly aware of the possible health hazards of this method. They were quite unfamiliar with the diaphragm--a method that is relatively inexpensive and safe, does not require male cooperation in the strict sense, and need only be used at the time of intercourse. Overall, it seems safe to assume that an expansion of their contraceptive horizons could aid them in the ability to delay further childbearing, if they establish that as a personal goal.

E. Findings Relating to Health

Health status is an important factor in the ability to make personal investments.[26] Educational progress and job experience can suffer if poor health interferes with school or work attendance. In the case of a young mother, the health of her infant can indirectly affect investment behaviors. Babies with poor medical histories require a lot of attention and care. The time required to attend to the baby's illness is time away from investment-related pursuits. The effect of a sick child can also be deleterious in more subtle ways: it can be emotionally draining, and may reinforce the girls' feelings that they have no control over their lives. Trust in a brighter future, and therefore interest in making investments, may be further eroded.

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[26] In economic models of human capital accumulation, health care is generally regarded as an investment because it affects life expectancy and hence lifelong earning capacity (e.g., Schultz, 1971). In this report we treat health status and health care as enabling factors rather than investments because the interviews focussed on a narrow range of health outcomes, namely those associated with the pregnancy. These outcomes are not viewed as having direct economic implications, but they could nevertheless affect current investment behaviors such as school attendance and work experience.

There is considerable evidence that young parents and their offspring are at risk to more health problems than are older women and their children. For example, the rate of infant mortality is extremely high for very young mothers (Menken, 1975; National Center for Health Statistics, 1976). Among both white and non-white women, risks to infants have been found to be much higher during the first month for women under 20 than for women aged 20 to 30. Perhaps the most serious medical problem related to teenage pregnancy is the increased risk of prematurity, as measured by low birth weights of the infants. The percentage of infants with low birth weights (2,500 grams or less) is significantly higher among women under 20 than among older women (Menken, 1975; Broman, 1978). Furthermore, children born to teens are more likely than other infants to have low Apgar scores (Broman, 1978; Jones and Placek, 1979; NCHS, 1981).

Complications of pregnancy (including toxemia, prolonged labor and iron-deficiency anemia) are fairly common among young mothers. Poor diets, late or inadequate prenatal care, and physical or emotional immaturity may be contributing factors (Bonham and Placek, 1978; Menken, 1975; Carruth, 1978; Stepco, Keith and Keith, 1975; King and Jacobson, 1975). The children born to teenage mothers tend to experience a higher-than-average number of health problems, which often persist in later life (Klerman and Jekel, 1973; Zackler and Brandstadt, 1975). Difficulties in obtaining sound medical care have been found to be common in this group due to high costs and the complications of obtaining services in a large bureaucracy such as the Medicaid system (Cannon-Bonventre and Kahn, 1978). According to 1977 data from the National Center for Health Statistics, young women continue to receive relatively less prenatal care than older pregnant women. Only 3 percent of the girls aged 15 or younger received prenatal care during the first trimester of pregnancy, compared with 74 percent of all women (NCHS, 1979).

In the baseline survey for Project Redirection, the interviews asked some limited medical questions of the respondents in order to get a general sense of the health status of these teens, particularly with respect to their pregnancy. It should be kept in mind that the information was gathered by self-reports and has not been verified against medical records.

Pregnant girls (N=277) were asked several questions about their current pregnancy including questions about medical care. According to these girls' reports, the majority (73.3 percent) had received medical care during the first three months of their pregnancy. While a higher percentage of 16 and 17 year old girls (75.1 percent) reported first trimester care than girls 15 and under (70.2 percent), these percentages for both age groups compare favorably with the NCHS statistics for prenatal care received across all age and socioeconomic groups (74 percent). First-time pregnancies were as likely as higher-order pregnancies to have received medical attention during the current pregnancy. Timing of prenatal care was unrelated to ethnicity.

Mothers (N=255) were asked to recall when they had first received prenatal care for their youngest baby. A much lower percentage (55.3 percent) said they had gone to a doctor in their first trimester than was true among currently pregnant girls. It is difficult to interpret this difference. It could represent problems of recall; it could also represent a greater tendency of currently pregnant girls to provide answers that are socially acceptable. Conceivably it could represent improved services or better public information about prenatal care over the past one- to two-year period, but this explanation seems implausible.

The majority of currently pregnant teens (67.3 percent) had visited a physician five or more times by the time of the interview.[27] Younger girls had received somewhat less prenatal care than older ones: 24.5 percent of girls aged 15 and under, compared with 39.5 percent of 16 and 17 year olds had seen a doctor more than eight times ($\chi^2 = 9.6$, df = 4, $p < .05$). The majority of mothers in both age groups (63.6 percent) had had more than eight doctor visits during their most recent pregnancy. Parenting status and ethnicity were not associated with different amounts of care in this sample.

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[27] The majority of pregnant teens were between 5-8 months pregnant at the time of the interview.

Part of the age group differences in prenatal care among those currently pregnant may be attributed to the fact that older girls reported being more likely than younger ones to have been bothered by an illness or special pain during this pregnancy: 42.2 percent of the 16-17 year olds versus 28.8 percent of the 15 and younger girls reported having had a problem ($\chi^2 = 4.4$, df = 1, $p < .05$). There does not appear to be any straightforward explanation for this finding, and it does not repeat itself for the mothers in their reports on their most recent pregnancy. In any event, hospitalization for these illnesses, which was required for about a quarter of the pregnant girls who had had a medical problem, was no more prevalent in one age group than in the other.

Among the 255 women who were able to report on their childbirth experience and subsequent medical treatment, the mean number of days in the hospital for their delivery was 3.9 days. The 71 women who reported a hospital stay longer than three days were asked why they had been hospitalized beyond the standard time limit. The most common response (32.4 percent) was that the birth had been by Caesarian section. Other commonly reported reasons were an elevated blood pressure (12.7 percent), high fever (9.9 percent), or an illness of the baby's (7.0 percent). The infants weighed, on the average, six pounds, eight ounces, which is within the low-normal range for infant birth weights. A total of 38 babies (15.3 percent of the births), were under 2500 grams (5.5 pounds), which is the cut-off for births considered to be of low birth-weight. This high percentage of low birth-weight babies is consistent with national figures: in 1978 approximately 15 percent of nonwhite teen mothers, compared with 12 percent in the 20-24 age range, gave birth to babies under 2500 grams (NCHS, 1980). Differences in birth weight were unrelated to background variables in this sample.

A rather large percentage of babies (20.8 percent)[28] did not go home from the hospital with their mothers. Prematurity (34.7 percent) and jaundice (30.6 percent) were the most commonly cited reasons for the baby's extended stay in the hospital. Among those infants who did not go home with their mothers, their average length of time in the hospital was 16.8 days. None of the variables relating to the baby's initial well-being was associated with the mother's age, parenting status or ethnicity.

Most girls (88.1 percent) reported having gone in for a checkup since the birth of their babies, and the majority of these (93.2 percent) had had their visit within ten weeks of delivery. Hispanic teens (75.8 percent) were less likely than black (92.3 percent) teens to have had a postpartum checkup ($\chi^2 = 11.8$, df = 1, $p < .001$). The majority of the young mothers reported having no medical problems for themselves (77.6 percent) or their babies (76.2 percent) following childbirth, and most reported problems tended to be short-term and relatively minor (e.g., pains from the stitches following a Caesarian section).

In summary, there were no strong indications in the data that this sample of teens had severe health problems, or that they were lacking medical attention. A surprisingly high percentage said they had received prenatal care during their first trimester and most reported having received timely postpartum care. The infants, on the other hand, tended to be born prematurely, and a fairly substantial minority stayed in the hospital after their mothers left. Nevertheless, relatively few women reported that their babies had had any medical problems since their birth, and the problems cited tended to be fairly typical of infant maladies (e.g., allergies, diarrheas and infections accounted for 41.2 percent of the reported problems).

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[28] This figure is substantially higher than that reported in a study of 448 young mothers in Wisconsin, in which only 8 percent of the babies failed to return home when their mothers were discharged (Grow, 1979). However, the mothers in the Wisconsin sample were older (up to age 25), more likely to be married, and less economically disadvantaged than our respondents.

F. Findings Relating to Services and Supports

Despite the fact that the number of special programs for pregnant teens and teen mothers rapidly proliferated during the 1970's, the available information suggests that the programs tend to be small, scattered, and restricted in the services they offer. Although there is little concrete information about the utilization and effectiveness of these programs as a whole, there is considerable agreement that service provision has not adequately met the needs of this target population.

Fragmentation has been identified by numerous commentators as a major cause of service delivery inadequacies. In an earlier study of the service needs of this population, AIR researchers found that the large range of health, education and welfare services is most frequently offered to these young clients in an uncoordinated fashion. This fragmentation often occurs over time; e.g., usually adolescents must find separate services for the same basic set of needs before and after delivery of the baby. Additional fragmentation occurs among service providers, so that health-related, educational, and social welfare services are usually obtainable simultaneously only by the client initiating and maintaining a separate relationship with each provider (Cannon-Bonventre and Kahn, 1979).

Service fragmentation is certainly not unique to the population of teen mothers. Having to obtain different types of services from different providers is the norm, not the exception, in our human services delivery system. The main difficulty is that this population is not sufficiently sophisticated--or motivated--to navigate this complex and confusing system.

Adolescents are frequently reluctant and slow to seek out and utilize needed services. For example, pregnant teens are typically slow in obtaining prenatal care. Approximately 50 percent of mothers age 15-17 received no care in their first trimester (AGI, 1978). As parents, the same behavior pattern continues. They are often apathetic about seeking assistance until a problem has become a crisis or emergency (Cannon-Bonventre and Kahn, 1979). Similar observations have led several commentators to point out that adult models of service delivery are inappropriate for this client population and that aggressive outreach and follow-up are essential to program success (Cartoof, 1978; Forbush, 1978; Furstenberg et al., 1972; Schinke, 1978).

Even when teen parents find their way into a special program or a general service delivery agency, many of their most pressing needs continue to go unmet. The AIR study of the service needs of this population found that many families headed by adolescent parents (especially single mothers) were in critical need of concrete aid in the form of food, clothing, housing, financial assistance, child care, health care (including contraceptive services), and job training and placement. These direct services were often difficult or impossible to secure. The services that tend to be widely available are indirect services such as counseling and information and referral, although even the latter may be inaccessible to many inexperienced and uninformed adolescents. The researchers concluded that the availability of only indirect services is often highly frustrating to teenage parents and may discourage further service utilization (Cannon-Bonventre and Kahn, 1979). Similar findings were reported in a more recent survey of 185 teen mothers from four sites (Zitner and Miller, 1980).

We view service utilization as an "Enabling Factor" because the use of formal services can presumably facilitate a higher level of personal investment. The enabling chain may be complex: financial assistance may lead to an improved child care arrangement, which may facilitate a return to school. Regardless of the nature of the linkages, we believe that without adequate supports, the obstacles this population faces in trying to make investments are formidable.

Information about service patterns was obtained by presenting respondents with a list of services and asking them if they had received formal assistance in each of the areas within the past three months, and if not, whether they needed the service. A summary of the responses for the full sample is presented in Table 3.29. The left-hand column of the table shows service receipt, in declining order of utilization. The most frequently used services were medical care for the baby and self, the WIC program (a food supplement program), and food stamps. More than half the sample had

TABLE 3.29

SELECTED SERVICES USED AND NEEDED BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Service Category	Percentage Needing Service			Percentage Not Needing Service	Total	Percentage of Those Needing Service Who Used it in Last 3 Months[c]
	Using Service in Past 3 Months	Needing But Not Using Service[a]	Total Needing Service[b]			
Medical Care For Baby	78.2	10.1	88.3	11.7	100.0 (N=248)	88.6
Medical Care For Self	72.8	15.8	88.6	11.4	100.0 (N=507)	82.2
WIC	61.7	26.9	88.6	11.4	100.0 (N=507)	69.6
Food Stamps	50.6	30.2	80.8	19.2	100.0 (N=506)	62.6
Birth Control Counseling	45.8	22.6	68.4	31.6	100.0 (N=509)	67.0
Nutritional Counseling	43.8	24.8	68.6	31.4	100.0 (N=509)	63.8
Sex Education	42.1	22.4	64.5	35.4	100.0 (N=503)	65.3
Parenting Classes	36.3	33.9	70.2	29.8	100.0 (N=508)	51.7
Personal Counseling	29.7	33.0	62.7	37.3	100.0 (N=509)	47.3
Pregnancy Counseling	29.6	25.9	55.5	44.5	100.0 (N=506)	53.3
Educational Counseling	28.3	41.5	69.8	30.3	100.0 (N=509)	40.5
Job	24.8	59.1	83.9	16.1	100.0 (N=508)	29.5
Child Care	23.1	35.8	58.9	41.1	100.0 (N=246)	39.2
Recreation	21.5	37.3	58.8	41.2	100.0 (N=507)	36.6
Crib	19.4	48.5	67.9	32.0	100.0 (N=509)	28.6
Job Training	13.3	67.4	80.7	19.3	100.0 (N=503)	16.4
Tutoring For School Work	9.7	44.6	54.3	45.8	100.0 (N=507)	17.9
Housing Assistance	6.3	33.5	39.8	60.2	100.0 (N=505)	15.9
Legal Assistance	6.1	18.1	24.2	75.8	100.0 (N=508)	25.2
Help With Drug Problem	3.6	5.6	9.2	90.9	100.0 (N=505)	39.1

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

[a] Respondents who did not use a given service in the 3-month period prior to the baseline interview, but who felt they needed that service.

[b] It is assumed that those who used a given service needed it; therefore total need is the percentage of respondents either needing or using the service.

[c] The percentages in this column were calculated by dividing the percentage using a service by the total percentage needing the service.

used these services within the previous three months. The least frequently used services (reportedly used by less than 10 percent of the respondents) were help for a drug problem, legal and housing assistance, and tutoring for school work.

The second column of Table 3.29 shows the percentage of respondents who did not receive a given service within the previous three months, but who expressed a need for the service. The services for which respondents expressed the greatest unmet need were job training, job counseling, assistance in obtaining infant goods, tutoring for school work, and educational counseling. At least two out of every five respondents indicated an unmet need for these services.

The last column of the table shows the percentage of respondents expressing a need for a service who had actually used it in the past three months. It points out that, with the exception of medical care, fewer than two-thirds of all respondents who said they needed a given service had actually made use of it. Thus, for example, only two in five teens who needed help with child care arrangements or with educational counseling had received this assistance, while fewer than one in six teens who needed job training received it. These findings suggest the need for a comprehensive program such as Project Redirection that can put teens in touch with the services they need.

Service utilization and need varied somewhat within various subgroups, but not markedly. Within the parenting groups, the few existing differences were almost entirely predictable. For example, girls in a first pregnancy were more likely than the teen mothers to have had pregnancy and nutritional counseling within the previous three months. The two parent groups, on the other hand, were more likely to have recently used parenting education services. The mothers were more likely than the pregnant girls to express a need for concrete assistance with infant goods (e.g., cribs and carriages).

Service utilization patterns did vary among the ethnic groups, as indicated in Table 3.30. Black girls were significantly more likely than

TABLE 3.30

UTILIZATION OF SELECTED SERVICES BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY ETHNICITY

Type of Service	Percentage of Teens Utilizing Given Sources by Ethnicity			
	Hispanic	Black	White	All Ethnic Groups
Parenting Classes	31.3	39.6	18.2	36.5
Tutoring For School Work	11.3	9.3	0.0	9.7
Legal Assistance	6.9	5.1	27.3	6.1 **
Housing Assistance	5.6	6.3	18.2	6.4
Food Stamps	52.2	50.3	36.4	50.6
Child Care	20.3	24.7	0.0	23.2
Sex Education	37.7	44.7	36.4	42.3
WIC	70.6	57.8	54.5	61.8 *
Pregnancy Counseling	29.4	30.3	18.2	29.8
Medical Care For Baby	71.7	80.2	80.0	78.1
Medical Care For Self	69.2	74.9	63.6	72.9
Recreational Program	15.6	24.6	18.2	21.6
Help Getting Crib, Infant Goods	16.9	19.9	45.5	19.5
Help With Drug Problem	3.1	3.3	18.2	3.6 *
Birth Control Counseling	35.0	51.5	27.3	48.8 ***
Job Counseling	12.5	30.4	27.3	24.7 ****
Job Training	4.4	17.5	9.1	13.2 ***
Educational Counseling	14.4	35.4	18.2	28.4 ****
Nutritional Counseling	48.1	42.6	18.2	43.8
Personal Counseling	29.4	29.5	45.5	29.8

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The percentages shown indicate the percentage of respondents stating they had used the given service within the previous three months.

The number of respondents varied from service to service due to differences in missing data; however, the sample sizes seldom varied by more than two or three respondents. Thus, the frequencies for the above data are essentially as follows: Hispanics (159), Blacks (333), Whites (11), Total (503).

*A two-tailed chi-square test for this distribution is statistically significant at the .05 level.

**A two-tailed chi-square test for this distribution is statistically significant at the .01 level.

***A two-tailed chi-square test for this distribution is statistically significant at the .001 level.

****A two-tailed chi-square test for this distribution is statistically significant at the .0001 level.

girls in other ethnic groups to have used birth control counseling, job counseling, job-training and educational counseling services. Hispanic girls were the group most likely to have used a WIC program. Use of the WIC program was higher among the Puerto Rican teens (83.1 percent) than the Chicana teens (66.2 percent); ($\chi^2 = 4.4$, df = 1, $p < .05$).

Perceived needs for services were fairly uniform across the ethnic groups, although there were some isolated differences. Black girls were more likely to feel they needed job counseling, child care, WIC, and tutoring than Hispanic girls.

Two crude composite measures of the teens' service circumstances were created by summing the total number of services used and the total number of services needed for each respondent. While it is recognized that such indices fail to consider the dimension of intensity of service utilization, it was nevertheless felt that a global measure of exposure and need would be useful in summarizing the respondents' experiences and in evaluating group differences.

Table 3.31 summarizes the breakdown of these global service measures by age, parity and ethnic group. On average, respondents had used approximately 6 of the 20 services listed. There was, however, considerable variation: the standard deviation was 3.6, and range of scores was from 0 to 17. Similarly, respondents reported needing (but not having used) six services, and the standard deviation was 3.8. The number of services needed ranged from 0 to 18. Only one group difference was identified. Blacks had used a significantly higher number of services than other teens.

While all or most of the services examined may be considered factors that would enable teen parents to make personal investments in their futures, the availability of child care was considered a critical facilitator for this population. Without adequate child care, both educational and occupational pursuits would prove unfeasible for these mothers, regardless of the level of other enabling factors such as aspirations or health. As indicated in Table 3.29, formal child care services were used by only 23.1 percent of the young mothers. Yet approximately one-third of the remaining mothers felt they needed help with child care.

TABLE 3.31

MEAN NUMBER OF SERVICES USED AND NEEDED BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY AGE, PARENTING STATUS, AND ETHNICITY

Group	Mean Number of Services Used	Mean Number of Services Needed	Number in Group
Age Group			
≤ 15 years old	6.0	5.8	160
16-17 years old	5.8	6.2	354
Parenting Group			
Pregnant girls	5.7	6.0	256
Mothers	6.0	6.1	258
Ethnic Group*			
Hispanics	5.2	5.6	161
Blacks	6.2	6.3	339
Whites	5.3	5.8	11
All Respondents	5.9	6.1	514

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The means represent the mean number of services used in the past three months, or not used in the past three months but needed, from a list of 20 services presented to the respondents.

*For number of services used, a two-tailed F-test is statistically significant at the .05 level.

Several additional questions were asked to determine what sources of child care support were available to these young women. Table 3.32 summarizes the child care arrangements used by the mothers when they were in school, while they were working, and when they needed to run out to do errands or to keep an appointment. For all three circumstances, the majority of girls depended on their families to care for their children. The maternal grandmother was particularly likely to babysit in the mother's absence, especially while the mother was in school. Other relatives mentioned most frequently were aunts and sisters. The father of the baby was seldom called upon to care for the child in the mother's absence. Interestingly, day care centers were used only by mothers attending school. This suggests the possibility that many of the day care centers were associated with the schools the mothers were attending. Arrangements included in the "other" category were most frequently combinations of arrangements, the most common being the maternal grandmother and some other relative.

Some information about the range of the respondents' child care options was obtained by asking them what happened when their regular child care arrangement did not work out. The responses suggest that these girls do not have a secure fall-back position. The majority (52.2 percent) said they would take the baby with them. Within-family arrangements were the next most common responses: 8 percent said they would leave the baby with their mother, 4.4 percent would leave it with their sister, 3.6 percent would have their grandmothers babysit, and 8.7 percent mentioned some other relative. Only 7.6 percent said they would find a standby babysitter. None of the child care patterns was related to age, parity or ethnicity.

Teen parents obtain the services they receive from a wide variety of human services agencies. Most communities provide all of the services that we listed in the interviews, although teen parents may not know about or may not seek out these services. But, as noted in the introduction to this section, many communities also offer special programs for teen parents that are designed to attract and in some cases reach out to this population. Each respondent was asked whether she had ever participated in a special program for teen parents or pregnant teens. A little more than one-fourth

TABLE 3.32

TYPE OF CHILD CARE ARRANGEMENT USED BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY SITUATION REQUIRING CHILD CARE

Type of Child Care Arrangement	Percentage Using Child Care Arrangement in Various Situations		
	While in School	While at Work	While Doing Errands
Respondent's Mother	61.2	45.5	46.5
Day Care Center	11.5	0.0	0.0
Other Relative	9.7	15.9	10.6
Paid Babysitter	4.8	9.1	.8
Boyfriend/Husband	2.4	6.8	2.0
Takes Baby With Her	3.6	4.5	23.6
Friend or Neighbor	.6	4.5	1.2
All Other Arrangements[a]	6.2	13.7	15.3
Total	100.0	100.0	100.0
Number of Respondents	165	44	254

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The "in school" question was asked only of mothers who had been in school within the previous six months. The "at work" question was asked of mothers who had worked in the previous six months. The "doing errands" question was asked of all the mothers.

The totals may not add to 100.0 because of rounding error.

[a] Other arrangements included the father's siblings or parents and various combinations of categories previously listed.

(27.8 percent) said that they had. Significantly more blacks (32.2 percent) than Hispanic (19.5 percent) teens had been in a special program ($\chi^2 = 8.1$, df = 1, $p < .05$). This finding probably reflects geographic location primarily. Participation rates were highest in Bedford-Stuyvesant and Detroit.[29]

Participation in a teen parent program was strongly related to overall service utilization and need patterns. Teens enrolled in a special program had used an average of 7.7 services in the previous three months, compared with 5.9 services for those who had never been in a special program ($F = 15.2$, df = 1, 285, $p < .0001$). Non-participants identified an average of 6.4 services they needed compared with 4.4 among those in a special program ($F = 20.8$, df = 1, 285, $p < .0001$).

In summary, the respondents were found to be using a range of services in their communities, but there was a considerable amount of individual variation in service receipt. Black girls reported receiving more services than other girls, but this probably reflects the fact that a higher percentage of black teens (especially those in Bedford-Stuyvesant) were enrolled in a special program for teen parents. The services identified as being most needed included WIC, assistance with job counseling and training. The findings have several implications for Project Redirection. First, it is noteworthy that the employment-related services, which represent an innovative feature of Project Redirection, were perceived as a needed service by an overwhelming majority of respondents. Second, the overall pattern of service utilization and need suggests that many of the needs for this population were not being met by the available resources. The need for a comprehensive and targeted service program such as Redirection is further underscored by the finding that those young women with experience in a teen parent program (and many of these were by no means comprehensive) were receiving more services than those with no comparable experience.

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[29] Our recruitment of respondents in Bedford-Stuyvesant was problematic, and it became necessary to obtain referrals from a teen parent program; 64.5 percent of the Bedford-Stuyvesant respondents had been in a special program.

In addition to examining patterns of formal service utilization by our respondents, we also asked about more informal sources of support and assistance. Like service availability and utilization, the informal support network was viewed as a factor that could facilitate personal investments on the part of these teens either directly (by enabling the teen to attend school or find work) or indirectly (by providing encouragement to strive for improved life outcomes). In fact, with respect to child care, the informal network was more likely to be used than were formal, organized child care providers.

With regard to their current support system, respondents were asked a question about whom they would feel comfortable turning to if they had something on their minds and wanted to talk things through. As shown in Table 3.33, the most frequently cited source of emotional support and advice was the respondents' mothers, to whom a majority said they could turn for assistance.[30] Boyfriends (and husbands for married respondents) were almost as likely as mothers to be viewed as a source of support. Except for boyfriends, respondents were less likely to identify males than females as confidantes. There was no significant relationship between types of available support on the one hand, and age, ethnicity and parenting status on the other. Furthermore, the average number of persons cited ($\overline{X}$ = 3.3) was unrelated to the respondent's background characteristics.

Teen parents have, in other research studies, identified social isolation as a problem of some concern to them: their peers, who are typically not pregnant and are still in school, are reportedly less available to them than previously, and they no longer share the same interests or lifestyles (cf. Cannon-Bonventre and Kahn, 1979). However, among this sample of respondents, a substantial number of girls (47.3 percent) said they could turn to girlfriends for advice and support. When asked more directly if they had close friends who lived nearby and with

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[30] As might be expected, respondents were significantly more likely to turn to their mother if she was a household member. Nearly 80 percent of the girls who cited their mother as a support lived with them. On the other hand, two-thirds of the girls who cited their father as a person to whom they could turn did not have their fathers in their households.

TABLE 3.33

PERSONS CITED AS AVAILABLE SOURCES OF EMOTIONAL SUPPORTS BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Source of Support	Percentage of Teens Citing Source
Respondent's Mother	61.1
Respondent's Father	14.5
Respondent's Sister(s)	37.5
Respondent's Brother(s)	7.5
Respondent's Husband	5.5
Respondent's Boyfriend	54.8
Social Worker/Counselor	35.7
Girlfriend(s)	47.3
Older Woman (Aunt, Teacher, Etc.)	42.7

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The question asked was "I'm going to ask you about different people in your life and I'd like you to tell me if you'd go to that person to talk things through (when you have something on your mind)?" The above list of sources was read to respondents.

The percentages do not add to 100.0 because the respondents could identify multiple sources of support.

The above percentages were based on data provided by 510 respondents.

whom they were in contact at least once a week, the majority of respondents (72.4 percent) said they had at least one such close friend, and nearly half said they had two or more. Feeling alone as a teen parent did not appear to be a problem that many of the respondents faced: 62.0 percent reported that they had a close friend who was either pregnant or already a parent. Hispanic teens (37.9 percent) were somewhat more likely than black teens (22.7 percent) to say they had no close friends with whom they were in touch weekly ($\chi^2 = 13.0$, df = 4, $p < .01$), but having a friendship with another teen parent was unrelated to ethnicity, as well as to age and parenting status.

As noted earlier, boyfriends and husbands were viewed by a large percentage of respondents as an important component of their support network.[31] The interview asked several further questions about the extent to which the baby's father was involved in the respondents' lives. Nearly three out of every four girls (71.0 percent) said that they still saw the baby's father, and of those more than half (51.6 percent) said they saw him every day. In only a handful of cases was contact less frequent than once a week. Among women with babies, almost all those who saw the baby's father reported that the child spent time with the father as well (89.5 percent). In the majority of these cases (68.1 percent), the fathers were in contact with their children several times a week or more. Contact between the mother and father or father and child was fairly consistent across all ethnic, age, and parity groups.

The fathers tended to be several years older than the girls: the average age was 20.8, with an age range from 14 to 38. Suprisingly, the father's age was similar for both the older ($\overline{X} = 20.8$) and younger ($\overline{X} = 20.7$) group of girls. A question about what the fathers were currently doing yielded varied results. About a third (35.0 percent) of the girls said the father was working. Many were employed in low-paying, unskilled jobs such as short-order cook, stock clerk and security guard, although a number were also working in skilled blue-collar occupations such as construction and auto mechanics. About one-fourth of the fathers were reported to still be in school. The remaining 40 percent of the fathers were engaged in a variety of things, such as job hunting (9.3 percent), in the service (3.5 percent), in jail (3.9 percent), or not doing anything (6.3 percent).

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[31] The role of the baby's father in affecting the mother's life outcomes has not been adequately explored by researchers. The recent Guttmacher document, however, reports that one study found the baby's cognitive development to be better if the father helped to care for the baby than if the child was brought up by the mother alone (AGI, 1981).

In summary, the sample of respondents appear to have a fairly solid network of social supports available to them. Most teens had several friends and relatives to whom they could turn for assistance. The network included friends who were in a similar situation to their own (i.e., were teen parents). A high percentage of girls continued to have contact with the fathers of their babies. While it thus appears that their support network was adequate in terms of its size, the data offer only limited insights into the nature and quality of the supports offered. One might infer from the information about their friends and their boyfriends, however, that these girls typically lack figures in their immediate network who could serve as role models for effective investing and upward mobility.

G. Findings Relating to Psychological Factors

The psychological correlates and consequences of teenage pregnancy are topics that are less well researched than the economic ones. A few studies do indicate that problems such as loneliness and isolation are commonly reported among teen parents (Baldwin, 1977; Cannon-Bonventre and Kahn, 1979; Howard, 1978; Watts, 1971). Gabrielson and his colleagues (1977) found that teenage parents were more prone to suicide and depression than women the same age without children. In general, however, little is known about the psychological status of this population of young women.

In the baseline survey, we looked at two psychological characteristics that were viewed as potential precursors to an individual's decision to invest in themselves: self esteem and locus of control. Both were considered characteristics that could function in a motivational capacity. That is, it was assumed that teens who felt better about themselves and about their ability to control their lives would be more motivated to continue their education, pursue a career, and avoid unplanned pregnancies.

Self-esteem was measured by an abbreviated, six-item version of Rosenberg's Self Esteem Scale. Scores could range from a low of 6 for the lowest levels of self-esteem to a high of 24 for the highest levels of self-esteem. Table 3.34 summarizes the breakdowns of the self esteem scores according to age, parity and ethnic group. As this table shows, the mean score on the self-esteem scale was 19.1,[32] indicating fairly positive overall self images. Hispanic girls scored significantly lower on this measure than did black teens, although the Hispanic girls' scores did reflect positive self concepts. The self concept scores of the Chicanas ($\bar{X} = 17.6$) were somewhat lower than those of the Puerto Rican group ($\bar{X} = 18.3$; $F = 3.6$, $df = 1{,}140$, $p < .06$). Self concept was unrelated to age or to the parity group.

Responses to the actual items are shown in Table 3.35. For every item, only a minority of the interviewed girls gave responses that reflected self-depreciation. The statement that elicited the highest number of negative responses was "I feel I don't have much to be proud of," but fewer than 20 percent of the girls agreed with that statement.

The second psychological variable was locus of control, measured by a five-item scale. Locus of control is a construct that relates to a person's perceived sense of control over life events. Those with an internal locus of control tend to view themselves as having primary responsibility for their own outcomes, while those with an external orientation view circumstances or persons external to them as controlling those outcomes.[33] The five-item scale had values that could range from 5 (the most external orientation) to 20 (the most internal orientation).

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[32] The mean Self Esteem score on this same measure for a sample of sexually active teenage girls of mixed social class in Boston was 18.4 (Polit et al, 1981).

[33] There is some evidence that effective contraceptors are more internal in their locus of control than girls who do not practice effective birth control (Steinlauf, 1979).

TABLE 3.34

MEAN SELF-ESTEEM SCORES OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY AGE, PARENTING STATUS, AND ETHNICITY

Group	Mean	Number in Group
Age Group		
15 Years Old or Younger	18.9	158
16-17 Years Old	19.1	349
Parenting Group		
Pregnant Teens	18.9	253
Mothers	19.3	254
Ethnic Group****		
Hispanics	18.0	158
Blacks	19.6	335
Whites	19.4	11
All Respondents	19.1	507

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The Self-Esteem Measure consisted of six items. Scores could range from a low of 6 to a high of 24, with higher scores reflecting more self-esteem.

****Two-tailed F-test statistically significant at the .0001 level.

TABLE 3.35

RESPONSES TO ITEMS ON SELF-ESTEEM SCALE BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Self-Esteem Item	Percentage of Teens in Agreement	Percentage of Teens in Disagreement	Total
I feel good about the way I look...(Agree)[a]	87.8	12.2	100.0 (N=510)
On the whole, I am satisfied with myself.......(Agree)	84.1	15.9	100.0 (N=510)
I feel that I'm a person of worth, at least equal to others.....(Agree)	94.2	5.8	100.0 (N=510)
All in all, I think I'm a failure....(Disagree)	10.0	90.0	100.0 (N=510)
I feel I don't have much to be proud of........(Disagree)	18.3	81.7	100.0 (N=508)
I feel I have a number of good qualities..(Agree)	89.5	10.5	100.0 (N=509)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection and comparison group members.

NOTES: These self-esteem items were borrowed from Rosenberg's Self-Esteem Scale. The items have been widely used to measure self-esteem in teenage populations. For example, they are included as part of a "Psychological Inventory" compiled by Dr. Peter Scales of Mathematica, Inc. for use in connection with a battery of scales designed to measure sexual attitudes and knowledge in teenagers.

"Agreement" refers to those who "agreed" or "strongly agreed" with the statement. "Disagreement" refers to those who "disagreed" or "strongly disagreed" with the statement.

[a] The response in parentheses indicates the response scored as signifying positive self-esteem.

Table 3.36 summarizes the results of the locus of control analyses. The mean score for the sample was 13.8, a score close to the theoretical neutral midpoint of 12.5, but reflecting a modest internal orientation. Scores on the locus of control measure were not related to parity or age. Black and Hispanic teens had similar average scores.

Table 3.37 indicates the percentage of respondents agreeing with the five items that comprise the locus of control scale. This table shows that the two items that made positive statements about the individual's ability to control their own destiny (#4 and 5) tended to elicit high rates of agreement. On the other hand, many teens also felt that luck or external influences played an important role in life's events. This ambivalence or inconsistency undoubtedly contributed to the fact that total scores tended to be in the middle range between internal and external.

In summary, these teen parents generally had high levels of self esteem. Although Hispanic teens had significantly lower self esteem scores than other girls, the absolute differences were small. The locus of control variable was unrelated to the teens' background characteristics.

H. Findings Relating to Respondents' Home Environment

Young people who make only marginal investments in themselves continue to come disproportionately from economically disadvantaged families. One of the most detrimental and far-reaching consequences of poverty, in fact, is that the poor are constrained from making the investments they need to get ahead. Their investment opportunities are often limited, and their resources of time, energy, and stamina are generally exhausted. The process of making ends meet, of working through the bureaucratic logistics of the social service system, of coping with the hazards of low-rent areas tends to deplete psychic energy. Over time, and over generations, trust in a different future is undermined; investment of scarce resources seems pointless.

In various ways, the familial setting can encourage (or undermine) the development of personal motivation, self esteem, and a positive orientation

TABLE 3.36

MEAN LOCUS-OF-CONTROL SCORES OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY AGE, PARENTING STATUS, AND ETHNICITY

Group	Mean	Number in Group
Age Group		
15 Years Old or Younger	13.7	157
16-17 Years Old	13.9	344
Parenting Group		
Pregnant Teens	13.8	251
Mothers	13.8	250
Ethnic Group*		
Hispanics	13.6	155
Blacks	13.9	333
Whites	15.3	11
All Respondents	13.8	501

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The locus of control measure consisted of five items. Scores could range from a low of 5 (external orientation) to 20 (internal orientation).

*Two-tailed F-test statistically significant at the .05 level.

TABLE 3.37

RESPONSES TO ITEMS ON LOCUS-OF-CONTROL SCALE BY PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE

Locus of Control Item	Percentage of Teens in Agreement	Percentage of Teens in Disagreement	Total
Getting ahead in life is mostly a matter of luck...... (Disagree)[a]	39.7	60.3	100.0 (N=514)
It's not always wise to plan too far ahead because many thangs turn out to be a matter of good or bad luck anyway................(Disagree)	62.8	37.2	100.0 (N=514)
Many times I feel that I have little influence over the things that happen to me..... (Disagree)	64.4	35.6	100.0 (N=514)
What happens in my life depends on what I do....(Agree)	80.5	19.5	100.0 (N=514)
It's up to me to determine my future................(Agree)	93.8	6.2	100.0 (N=514)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: "Agreement" refers to those who "agreed" or "strongly agreed" with the statement. "Disagreement" refers to those who "disagreed" or "strongly disagreed" with the statement.

[a] The response in parentheses indicates the response scored as signifying a more internal orientation.

toward the future. While programs like Project Redirection strive to affect these same characteristics, teen parent programs must accept the home environment the girl brings with her as a "given:" the program can seldom directly affect the home living situation. Many program evaluations, including those with which AIR has been involved, have demonstrated the powerful impact the family background can exert on personal ambitions and investments. For example, our recent evaluation of the Cities in Schools program--a program aimed at a similarly disadvantaged population of urban youth--found that the program was most successful among those who brought some "assets" in the form of familial resources with them into the program.

Other research has indicated that family characteristics such as the intactness of the family and economic status are related to a girl's age at first birth. That is, girls from single parent, low-income families are more likely to become parents during their teenage years than girls from intact, higher income families (Card and Wise, 1978; Moore, et al, 1979). There exists abundant documentation that "impoverished" family backgrounds are negatively related to a host of life outcomes such as adult occupational status and educational attainment (e.g., Wright, 1978; Squires, 1977; Jiobu, 1976). The question we posed is the following: to what extent does this sample come from home environments that can be described as disadvantaged? We were interested in documenting both what is typical for this group of teenagers, as well as what the upper and lower boundaries of their assets are.

Fewer than one out of five (18.3 percent) of the respondents in our sample grew up in an intact family with both parents present. The majority of teens (68.2 percent) had grown up in mother-headed families. Hispanic girls were more likely to have been raised by both parents than other girls, as shown in Table 3.38, but in no ethnic group did intact families account for as many as 25 percent of the childhood family structures.

Most respondents reported that they continued to live at home with one or both parents even after their pregnancy (Table 3.39). At the time of the interviews, 72.1 percent of the teens said they were living in house-

TABLE 3.38

LIVING ARRANGEMENT OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS DURING CHILDHOOD, BY ETHNICITY

Living Arrangement During Childhood[a]	Percentage Distribution of Teens, by Ethnicity			
	Hispanic	Black	White	All Ethnic Groups
With Mother Only	63.8	70.2	81.8	68.4
With Father Only	3.8	1.5	9.1	2.4
With Both Parents	23.1	16.2	9.1	18.2
With a Guardian or Relative	6.3	11.2	0.0	9.4
Other Living Arrangements[b]	3.1	.9	0.0	1.6
Total	100.0	100.0	100.0	100.0
Total Number of Respondents	160	339	11	510

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 percent due to rounding error.

A two-tailed chi-square test for this distribution is statistically significant at the .05 level.

[a] The question asked was: "Who did you live with for most of your life before you became pregnant?"

[b] Other living arrangements included "with parent and step parent"; "in an institution"; and "with foster parents."

TABLE 3.39

HOUSEHOLD COMPOSITION OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY ETHNICITY

Persons Present in Respondent's Household at Baseline	Percentage of Teens with Specified Household Member, by Ethnicity			
	Hispanic	Black	White	All Ethnic Groups
Mother Present	57.6	79.5	54.5	72.1****
Father Present	16.5	16.7	9.1	16.4
Both Parents Present	15.5	13.0	9.1	13.7
Sister(s) Present	43.7	60.1	36.4	54.5**
Brother(s) Present	47.5	60.7	45.5	56.2*
Own Child(ren) Present	39.2	54.8	45.5	49.7*
Husband Present	12.0	1.2	9.1	4.8****
Boyfriend Present	21.5	3.3	27.3	9.5****
Other Relatives Present	35.4	31.2	27.3	32.5
Non-related Persons Present	13.9	3.3	27.3	7.1****
Only Respondent Present	1.3	1.2	0.0	1.2

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The percents do not add to 100.0 because respondents could have multiple persons present in their households.

These data are based on the responses from 505 respondents.

*A two-tailed chi-square test for this distribution is significant at the .05 level.

**A two-tailed chi-square test for this distribution is significant at the .01 level.

****A two-tailed chi-square test for this distribution is significant at the .0001 level.

holds that included their mothers. Both parents were currently present in the households of 13.7 percent of the girls. The presence of at least one parent was significantly more frequent among black teens than among the other teens, as was the presence of siblings. Ethnic differences in household composition appear to be largely attributable to the fact that black teens were less likely than others to be married or to be living with their boyfriends and their husband's/boyfriend's family. Household composition at baseline was, suprisingly, unrelated to age and parity.

Only a handful of respondents (1.2 percent) reported that they lived alone, or lived alone with their child (1.0 percent).[34] On average, a total of 5.6 persons (including the respondent) were living in their households, with a range from 1 to 16. More than half of the respondents lived in households in which there were six or more members. Total household size was unrelated to the respondent's age or ethnicity. However, those teens who were already mothers had significantly larger households (mean of 6.0 members) than the pregnant teens (mean of 5.3 members), presumably accounted for primarily by the addition of the respondent's child to the household.

While the presence or absence of key family members was considered to be a powerful indicator of the respondents' home environment, there are obviously numerous other familial factors that play a role in shaping the girls' predispositions to make personal investments. The interviews examined several of these contextual factors, such as parental education, total number of siblings, precedent for teenage pregnancy within the respondents' families, and family income.

The girls came, for the most part, from families in which educational attainments were modest.[35] Slightly more than half of the girls (51.5

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[34] It must be recognized that some respondents may have been unwilling to admit the presence of a boyfriend if they felt that such an admission could jeopardize their welfare payments.

[35] Surprisingly, the respondent's current school status and her educational aspirations were unrelated to her mother's actual educational attainment. This fact may reflect, in part, the homogeneity of the respondents' mothers with respect to education.

percent) reported that their mothers had not received a high school diploma. An additional 15 percent did not know how far their mothers had gone in school. Substantially more Hispanic teens (90.0 percent) than black (46.8 percent) teens who knew their mothers' educational background said that their mothers had not received a diploma ($\chi^2 = 73.7$, df = 1, $p < .0001$).

Respondents were considerably less well informed about their fathers' than about their mothers' educational level: nearly half (49.5 percent) said they had no knowledge of their fathers' schooling. Of the remaining half of the sample who said they knew their fathers' background, 52.5 percent reported that their fathers had not received a high school diploma. Thus, respondents appear to have been raised in families in which attainment of even the most basic certification was the exception rather than the rule.

The number of siblings in a girls' family was considered an important aspect of the girls' home environment for two primary reasons. First, a large number of siblings would suggest that the respondents' mothers might be uninformed about, or might hold negative attitudes toward, the use of contraceptives. The mother's inexperience or value orientation could in turn affect the girls' own use of birth control. Second, family size has consistently been found to be (negatively) associated with aspirations, academic achievement, and educational attainment, even after controlling for social class (e.g., Rehberg and Westby, 1967; Turner, 1962; Nuttall, Nuttall, Polit and Hunter, 1976). The teenage girls we interviewed came, for the most part, from large families. Overall, the average number of siblings was 5.2, with a standard deviation of 3.3. The actual number of siblings ranged from 0 to 16. Hispanic teens came from larger families (mean number of siblings = 5.8), than black teens ($\bar{X} = 5.0$); ($F = 7.0$, df = 1, 486, $p < .01$).

One other aspect of the girls' family milieu that was examined in the interviews was the absence or presence of role models with respect to teenage parenthood.[36] It was assumed that there would be more acceptance of the teenage parent status (and, possibly, less inclination to strive for a different lifestyle) in families in which there had been one or more precedents of teenage pregnancy. The teens were therefore asked at what age their own mothers had first had a baby. Eleven percent of the respondents did not know how old their mothers were at first birth. Among those who did know, more than three-fourths (77.8 percent) said that their mothers had been teenage parents. Hispanic teens (77.0 percent) were more likely than black girls (66.5 percent) to have had a precedent of teen parenthood set for them by their mothers ($\chi^2 = 8.6$, df = 2, $p < .02$).

Respondents were also asked how many of their sisters were parents (or currently pregnant) and, of these, how many had been pregnant as teenagers. A total of 239 teens said that at least one of their sisters had children, and of these sisters, 217 (90.7 percent) had had a teenage pregnancy. Having a sister as a role model[37] for a youthful pregnancy was unrelated to age, ethnicity or parity.

The interviews also gathered some information from the respondents with respect to their economic condition. It should be noted, however, that the data on household finances are probably less reliable than data on other issues. According to our interviewers, many respondents seemed confused or embarrassed by the income-related questions, and interviewers often got the impression that the respondents were guessing. Furthermore, it was apparent during the interviewing that some teens could respond only in terms of their own financial resources, rather than that of their household. Nevertheless, the pattern of responses gives us a crude indicator of the economic difficulties of these respondents.

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[36] Prior studies have found that teenage mothers are nearly twice as likely to have had a teenage parent themselves as later childbearers (AGI, 1981).

[37] In some cases, the respondent may have been the role model for her sister. However, based on the information we gathered on the sisters' ages and the ages of their children, this appears not to have been the case for most respondents.

Table 3.40 lists a variety of sources of economic support and shows the percentage of respondents who claimed they received support from each source. Public assistance in the form of AFDC, food stamps and WIC was the most commonly cited type of economic support. The fact that only 78.1 percent of the sample was on AFDC reflects the fact that, particularly in certain sites, AFDC status was pending the birth of the child or the processing of the necessary paperwork. Thus, 68.4 percent of the pregnant girls and 87.6 percent of the teen mothers were receiving AFDC at the time of the interview. The fact that Hispanics were less likely than blacks to be on AFDC appears to be attributable primarily to site differences, which were fairly marked due to differences in state requirements for AFDC.

Parents were mentioned as providing income to the household by a majority of respondents, but unfortunately the source from which parents derived their contribution (through employment, social security, etc.) was not ascertained. A substantial number of respondents (23.4 percent), particularly blacks, reported that other relatives contributed to the household finances. Approximately one out of four teens said that their husbands or boyfriends made contributions from their own employment.

As indicated in Table 3.41, the absolute level of household income for this sample appears to be quite low in general. The majority of respondents (66.5 percent) said that their monthly household income from all sources was under $600. Only about one in five girls reported having household incomes that exceeded $600 per month and only 6.9 percent said that it exceeded $800. Given the average size of the respondents' households (5.6 members), annual incomes that average roughly in the $5,000 to $6,000 range indicate that we are indeed dealing with a group of economically disadvantaged girls.[38]

In summary, most of these girls come from home backgrounds that many would view as disadvantaged, at least with respect to the assets that might

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[38] Household income was only modestly related to number of family members. For example 48.6 percent of those households with five or fewer persons were reported to have monthly incomes of $400 or less, compared with 35.5 percent for households with six or more members.

TABLE 3.40

SOURCES OF ECONOMIC SUPPORT OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY ETHNICITY

Source of Economic Support	Percentage of Teens Citing Specified Source, by Ethnicity			
	Hispanic	Black	White	All Ethnic Groups
Respondent's Own Employment	14.4	12.1	0.0	12.5
Husband's or Boyfriend's Employment	24.8	31.0	18.2	28.8
AFDC	74.2	80.8	54.5	78.1****
General Relief	7.9	5.0	0.0	5.8
Respondent's Paren(s)	53.2	58.3	54.5	56.5
Other Relatives	15.0	27.5	30.0	23.4*
Unemployment Compensation	1.9	6.2	0.0	4.7
Food Stamps	69.6	72.1	54.5	70.9
Other Sources	11.9	11.2	20.0	11.9

SOURCES: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The percents do not add to 100.0 because respondents could have multiple sources of economic support.

These data are based on the responses from 509 respondents.

*A two-tailed chi-square test for this distribution is statistically significant at the .05 level.

****A two-tailed chi-square test for this distribution is statistically significant at the .0001 level.

TABLE 3.41

MONTHLY HOUSEHOLD INCOME OF PROJECT REDIRECTION PARTICIPANTS AND COMPARISON GROUP MEMBERS AT BASELINE, BY ETHNICITY

Monthly Household Income	Percentage Distribution of Teens, by Ethnicity			
	Hispanic	Black	White	All Ethnic Groups
Under $400	44.4	41.0	27.3	41.7
$401 - $600	22.5	25.5	36.4	24.8
Over $600	21.3	19.5	27.3	20.3
Don't Know	11.9	13.9	9.1	13.2
Total	100.0	100.0	100.0	100.0
Total Number of Respondents	160	337	11	508

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The totals may not add to 100.0 due to rounding error.

A two-tailed chi-square test for this distribution is not statistically significant.

facilitate the girls' own investment behaviors. Typically, the girl was raised by her mother alone, who herself had been a teen parent and had had her education truncated at an early age. On a more positive note, the majority of teens continued to live with their families after their pregnancy and childbearing. There is evidence that the prognosis for teen parents who marry is less favorable than for ones who remain single. For example, repeat pregnancy has been found to be substantially higher and contraceptive utilization lower among married teen mothers than single ones. (Jekel *et al*, 1973; Furstenberg, 1976). Furstenberg and Crawford (1978) also found that teen parents who lived with their own parents or relatives were substantially more likely than those who did not to return to school postpartum, to complete school, and to be employed. One might also suspect that having family members readily available to provide emotional support, financial assistance, and child care would represent an important asset to these young mothers.

CHAPTER IV

Conclusion

The data gathered during the baseline survey provide a wealth of information about the target population and its needs, and about programmatic opportunities for furthering the goals of Project Redirection. The baseline findings are summarized below, and some substantive/programmatic implications of these findings are discussed.

A. Summary

Although the sample on which this report is based is not representative of all teenage mothers--it overrepresents low-income minority teens living in urban areas--it is probably a reasonable representation of a major segment of that population, that is, teen mothers from disadvantaged backgrounds. In fact, the data gathered for this report provide more detailed information from a large national sample of teen parents than has been available from previous research, which has tended either to focus on small, local samples or to report less in-depth information based on secondary analyses of a more general population.

The teen mothers in the present study were, as anticipated, somewhat deficient in comparison with other teens in terms of the kinds of investments they had made previously and are making now in their own futures. They also seemed handicapped by a shortage of resources or "enabling factors" that could be brought to bear in making such personal investments. Investment deficiencies were particularly marked in the educational arena. Only slightly over half of these girls were in school. Among those who had already given birth, not even half were in a school or GED program when they were interviewed. While pregnancy and childbirth were the most commonly cited reasons for dropping out of school, nearly one fourth of the sample had dropped out before the pregnancy had occurred. Among the dropouts, nearly 40 percent had not been in school for one year or more. Considering the fact that these girls were, on average, just under 16 years of age, these findings provide additional evidence that teenage mothers experience critical educational deficits. On the brighter side, most dropouts expressed an intention to return, and the majority of respondents wanted at least a high school diploma or GED certificate. Whether these aspirations are realized will be examined in the follow-up survey.

These teens had, as a group, a better profile in the area of work-related investments than educational ones. Many had had jobs, had notions of the kind of work they might like (although some had unrealistic ideas), thought they would be working in five years, preferred work to welfare, and expressed an interest in job-related services. Thus, there appears to be an inclination toward making work-related investments rather than school-related ones. In some respects, this may not seem unreasonable: these girls had been able to find work, at least on a part-time or temporary basis, with limited educational credentials. The school experience, for many, appears to have been unrewarding: a sizeable percentage of girls had left school before their pregnancies, and many others admitted that they did not like school. Nevertheless, it is possible that these girls will become as disenchanted with the workplace as they did with schools. Although a sizeable number of girls had worked, their work experience was in unskilled, low-paying jobs--the kind of jobs they will be forced to take if they do not complete high school or a GED program. It seems reasonable to speculate that, without the appropriate credentials, these teens may find their work experiences as unrewarding and frustrating as their school experiences have been. It would appear to be important for Project Redirection, with its emphasis on employment outcomes, to capitalize on these teens' current interest in work-related investments before that interest gets eroded by time and by a series of short-term, unfulfilling jobs. Continued emphasis on skills training, employability knowledge, and educational attainment would appear to be critical if the ultimate goal of the program is the economic self-sufficiency of teen mothers.

A potential obstacle to further investments is the possibility of an early repeat pregnancy. Despite their youth, one quarter of the sample had already had more than one pregnancy. And, unless their contraceptive behaviors improve, a sizeable percentage are likely to become pregnant again within the next year or two. Those who did use contraceptives regularly tended to use the most effective method (the pill), but only about half of the sample had ever used birth control. And 40 percent of those who used contraceptives reported that they did not use it all the time. The Birth Control Knowledge Test reveals that there are some major gaps in the information these teens have about contraceptives.

If their self-reports are accurate, the young women in our sample did not have the kinds of health-related deficits that have been reported in other studies of teen parents. As a group they appear to have had adequate medical attention both prenatally and postpartum. Although their infants had a higher-than-average rate of prematurity, the rate of subsequent medical problems appears to be normal.

The baseline data with respect to services and supports offer several indications that Project Redirection has potential for success. There is, first of all, indication that the services the program provides are needed by the teens. Although all teens were receiving some services, the average teen identified six additional services she needed but was not getting. Teens who had been in a special program for teen parents were less "needy" than those who had not been enrolled in such a program. This finding suggests that the participants will take advantage of many of the services the program provides, and will in fact be better served than nonparticipants. Although this may seem obvious, it is important because service receipt is the first step in the chain of causal events posited in leading toward improved long-term outcomes. That is, services and intervention are seen as leading to increased knowledge and motivation, which are the antecedents to investment behaviors. A second indication of potential success for Project Redirection is the pattern of stated needs. Respondents rated as "badly needed" many of the services that the program is designed to provide. This was especially true for employment-related counseling and training services.

The analyses of the "incoming assets" of these teens suggest that these girls do not have a store of solid resources upon which to draw in their efforts to make investments in their own futures. Their families were poor. Their households consisted of usually just the mother plus numerous siblings; their mothers were not well educated and had themselves been, in many cases, teenage mothers. On the other hand, the respondents often continued to live with their mothers, who provided support and assistance to them (for example, child care) during their young parenthood.

In summary, the sample clearly represents a target of concern for social intervention. These young women--particularly the Hispanics--are disadvantaged economically and educationally, and their long-term prospects for economic self-sufficiency do not look promising. The trajectories that they are on appear to need "redirecting."

B. Service Implications

In the summary above, we considered some broad issues having a bearing on the Project Redirection program rationale. In this section we present some additional discussion relating to specific services.

- Dropouts. Perhaps the most striking deficit in this population is the high drop out rate, and the high percentage of teens who are below the grade level for their age. Many of the teens had been out of school for substantial periods of time. It would appear that getting these teens back into a school program is a major need.

- Type of school program. The data indicated that dropouts were more likely to have been in a general (as opposed to vocational, business, or college preparatory) school program than current enrollees. One implication of this finding is that it is not enough to get these girls to simply return to school. Some solid educational, employment, and career counseling to encourage career planning could be helpful in generating the interest and enthusiasm needed to keep these teens in school.

- Job training. Many of the girls had received some form of training or instruction related to employment. It is of programmatic interest to learn that training in specific skill areas and instruction on how to find work were reported as least available.

The low scores on the employability test corroborate that many job readiness skills are lacking. It is also of interest to learn that the teens reported schools as being the most common source of job training. In light of the fact that the majority of girls were not in school, there is a clear need for non-school services or programs to pick up the slack in the job training area.

- Knowledge of training requirements. The respondents' performance on the test that measured knowledge of the training required for five specific jobs was not good overall. While it is true that the five occupations overrepresented white-collar, middle-class jobs and might therefore be a biased test, many girls aspired to just such occupations. This again points to the need for some career education.

- Nontraditional work. The average scores on the scale that measured attitudes toward nontraditional work for women indicate positive attitudes. However, the respondents who had specific careers in mind for themselves overwhelmingly identified jobs that are traditional for women (secretary, beautician, nurse). Of the five jobs listed in the training requirements test, the two "female" jobs (nurse and social worker) were most likely to be viewed as ones the respondents would like for themselves. Thus while these teens seem to feel that, in general, women can do "men's" work, they do not see themselves in a nontraditional field. Some counseling to foster greater openness to nontraditional jobs may therefore be appropriate.

- Contraception. About half of the girls had no experience with birth control. Even among birth control users, effective, consistent use of contraception was practiced by the exceptional teen. These girls were relatively ignorant about birth control, even though they may have used some method of pregnancy prevention. Their scores on the birth control knowledge test were low, and few teens had used more than one form of contraception. In this sample, the most commonly cited reason for not using birth control was anxiety over the side effects. These girls are clearly in need of better information so that they can make informed choices about a method of birth control that meets their needs. Responsible and assertive counseling appears to be needed regarding the consistent use of effective contraception so that any gains in other investment behaviors are not thwarted by an early repeat pregnancy.

- Child care. Child care was not identified as a need by the majority of respondents. However, the statistics might be misleading. If, for example, a girl had been at home for the preceding three months without working or going to school, she may have reported not needing child care since she was there to care for the baby herself. In order to make educational and occupational investments, however, these girls may need some form of child care assistance. Most girls with an acceptable child care arrangement counted on family members to help with the care of the baby, but it could be that those not in school or not working did not have access to such familial assistance.

APPENDIX A

APPENDIX A

Findings Related to the Technical Aspects of the Evaluation

In laboratory research, the analytic potential of the data base can be specified in advance of the data collection. In field research--e.g., in the Redirection evaluation--there are always surprises. Measures can be taken to maximize the likelihood of a data base with certain characteristics. But the extent to which hopes match reality is an empirical question that can be answered only after the baseline data have been examined. That question is the topic of this appendix. We focus on three issues.

First, we examine whether the experimental and comparison groups are, in fact, comparable. To what extent do they appear to have been drawn from the same social, economic, and demographic populations?

Second, we examine the degree to which the cities appear to represent comparable contexts. To what extent do the sites account for the variance that has been observed? If experimental sites differ markedly at baseline, disaggregated analyses at the site level may be required.

Third, we examine the data for the effect of a possible confound. Participants were interviewed at various lengths of time after enrollment. To what extent do those interviewed early differ from those interviewed later?

A. Differences Between the Experimental and Comparison Samples

An important question for the impact analysis is whether the analysis will be contaminated by pre-existing differences between the experimental and comparison samples. To some extent, statistical techniques can compensate for selection bias, as described in Chapter II. In the following discussion, the issue is whether the pre-existing differences are large or small.

To examine the differences between the experimental and comparison sites, we selected a subset of 30 variables from the baseline data set. The subset was selected to represent major variables from each of the areas discussed in Chapter III (demographic, educational, etc.). In terms of both the quantity and quality of group differences, this subset of variables is reasonably representative of the variables in the data file.[1] Table A.1 presents the results. The means (or percentages, depending on the indicator) for the experimental and comparison groups are shown.[2]

As Table A.1 indicates, the comparison and experimental groups differed significantly on several dimensions. The number of significant differences was larger than one would expect by chance, and therefore these differences (or at least all of them) are unlikely to be the result of chance. Approximately one out of every four comparisons resulted in a significant difference at the .05 level or lower. (See the more complete listing of variables in Appendix B.) The most noteworthy group differences were percent of girls currently in school, number of services needed, and participation in a teen parent program.

Several comments about these differences are in order. First, in most cases the absolute magnitude of the effect is rather small. Thus, for example, the experimental respondents had had an average of 1.2 pregnancies in comparison with 1.3 among comparison group respondents. This difference is unlikely to be of much practical or social importance.

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[1] Appendix B presents the experimental/comparison group differences for a more comprehensive set of variables.

[2] When a nominal distribution was involved (e.g., for the ethnicity variable), we display the percentage of responses that fell into one or more of the most important categories (for the ethnicity variable, we chose black and Hispanic). The test statistic that was used (chi-square) for the nominal variables is based on the distribution of responses across all of the response categories.

TABLE A.1

COMPARISON OF EXPERIMENTAL AND COMPARISON GROUP MEMBERS ON SELECTED VARIABLES AT BASELINE

Variable	Percentages or Means, by Group					
	Experimental Group		Comparison Group		Both Groups	
• Demographic						
Mean Age	15.9	(250)[a]	16.0	(264)	15.9	(514)
Percent Never Married	94.8	(237)	90.5	(239)	92.6	(476)
Percent Pregnant, Not a Parent	50.4	(126)	49.2	(130)	49.8	(256)
Percent Black	66.4	(166)	65.5	(173)	66.0	(339)
Percent Hispanic	29.2	(73)	33.3	(88)	31.3	(161)
• Educational						
Percent in School at Baseline	48.6	(120)	64.0	(165)	56.4 ***	(285)
Mean Highest Grade Completed	8.5	(237)	8.6	(260)	8.6	(497)
Percent of Dropouts Planning to Return	92.4	(109)	81.4	(79)	87.4 *	(188)
Percent Who Left School More Than 12 Months Before Baseline Interview	36.0	(55)	42.4	(39)	38.7	(84)
Percent Wanting More Than High School Diploma/GED	51.5	(122)	43.4	(108)	47.3	(230)
• Employment						
Percent Employed at Baseline	6.4	(16)	8.3	(22)	7.4	(38)
Mean Number of Jobs Held	1.2	(250)	1.0	(264)	1.1 *	(514)
Mean Score, Career Maturity Scale	19.5	(245)	18.6	(262)	19.0 *	(507)
Mean Score, Employability Knowledge Test	10.9	(248)	10.4	(259)	10.7	(507)
• Family Planning/Fertility						
Mean Number of Pregnancies	1.2	(250)	1.3	(263)	1.3 *	(513)
Percent Ever Used Birth Control	50.8	(127)	56.4	(149)	53.7	(276)
Mean Number of Birth Control Methods Used	1.4	(127)	1.3	(149)	1.3	(276)
Mean Score, Birth Control Knowledge Test	9.1	(248)	9.0	(264)	9.1	(512)
• Services/Supports						
Mean Number of Services Used	6.0	(250)	5.8	(264)	5.9	(514)
Mean Number of Services Needed	6.6	(250)	5.6	(264)	6.1 **	(514)
Percent Having Been in Teen Parent Program	18.2	(45)	36.9	(97)	27.8 ***	(142)
Mean Number of Mentions in Support Network	3.3	(250)	3.2	(264)	3.3	(514)
• Health-Related						
Mean Days in Hospital for Childbirth	3.6	(119)	4.1	(132)	3.9	(251)
Mean Weight of Infants in Ounces	104.8	(117)	104.4	(131)	104.6	(248)
Percent Having Visited Doctor Since Birth	94.2	(114)	82.7	(110)	88.2 **	(224)
• Psychological						
Mean Self-Esteem Score	18.9	(246)	19.2	(261)	19.1	(507)
Mean Locus-of-Control Score	14.0	(243)	13.7	(258)	13.8	(501)
• Home Environment						
Mean Number of Siblings	5.2	(244)	5.3	(258)	5.2	(502)
Percent With Neither Parent Present at Baseline	26.5	(66)	24.3	(64)	25.3	(130)
Percent in AFDC Household	77.5	(193)	78.6	(206)	78.1	(399)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

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In only a few cases was the magnitude of the difference substantial. School enrollment was one of these cases: nearly a third more comparison respondents than participants were enrolled in school.[3]

Another noteworthy aspect of the data in Table A.1 is that there is no marked pattern of differences. Thus, while more comparison respondents were currently in school, more of the experimental dropouts had plans to return to school. Furthermore, for most educational variables there were no group differences at all (e.g., highest grade completed, educational aspirations, school grades, school attendance, return to school postpartum, and so on--see Table B.2 in Appendix B). As another example, the groups differed in terms of the mean number of pregnancies, but not in terms of incidence of more than one pregnancy, incidence of miscarriage and abortions, birth control utilization, birth control knowledge, and perceived ease of access to contraceptives. (See Table B.4 in Appendix B.)

A third observation is that while a number of significant group differences did emerge, the amount of variance explained by the group variable was uniformly low, as tested using an asymmetric lambda for the nominal and ordinal measures and eta-squared for the continuous variables. With an N of 514, the likelihood is high that many group differences will be statistically significant. In effect, eta-squared and lambda measure the improvement in our ability to predict the value of the dependent variable once we know the value of the independent variable (in this case, whether the interview was conducted with an experimental or comparison subject). Thus, for example, Table A.1 reveals that the mean number of pregnancies was different for the experimental and comparison samples, and that it is unlikely ($p < .05$) that the difference was a chance result. In traditional terms, the difference was statistically significant. But the eta-squared is only .008. Knowing from which sample a case was drawn "explains" less than one percent of the variance in number of pregnancies. In no case did the group variable account for more than 3 percent of the variance (not shown in table).

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[3] When pregnant girls and mothers were analyzed separately, we found that the experimental/comparison difference was only significant among the pregnant girls. This finding could reflect the fact that a sizeable number of respondents in Bedford-Stuyvesant were recruited from a school program for pregnant teens. This recruitment also helps to explain the sizeable difference in the percentage of teens in the two groups who had participated in a special program.

Thus, taken in the aggregate, the experimental and comparison group differences were, for the most part, neither substantial in magnitude, frequent in number, nor consistent in directionality. The design appears to have done a reasonable job of providing fairly comparable groups. Nevertheless, it is clear that statistical controls will be needed for selected areas of baseline noncomparability.

Those variables for which we have baseline measures and for which group differences were detected can be handled through fairly routine statistical procedures. The most serious threat to the comparison group strategy is the possibility that there are unmeasured group differences that will affect the outcomes of interest. While there is no strategy for completely eliminating this problem in nonrandomized designs, some statistical procedures that model the selection process (see Heckman, 1979; Barnow et al, 1980) do permit adjustments to deal with unmeasured group differences. Futhermore, it seems reasonable to assume that many unmeasured attributes (such as motivation or ability) are in fact correlated with measured variables (such as educational progress and age), so that by controlling for measured variables, the relevant unmeasured ones will be at least partially controlled.

B. Differences Among Sites

This section addresses the question of baseline differences among the eight sites. As indicated in Chapter II, baseline data were collected from eight sites: four "experimental" and four "comparison" sites. The sites were matched as follows: Boston with Hartford, Harlem with Bedford-Stuyvesant, East Detroit with West Detroit, and Phoenix with San Antonio. Of the four pairs the New York City and Detroit pairs have substantially greater face validity as "comparable" environments than the other two, if only because they exist under the same municipal and state systems.

Table A.2 presents the site-by-site results on the same 30 variables presented in Table A.1. In examining Table A.2, one can see that the sites are more heterogeneous than the experimental/comparison dichotomy. An inspection of Table A.2 suggests a number of patterns. In the discussion that follows, we consider both the contrasts among the demonstration sites and the goodness-of-match between the paired sites.

1. Differences Among the Experimental Sites

The data in Table A.2 from the four experimental sites point to different populations of Redirection participants.

The most conspicuous outlier is Boston. Ethnically, the Boston sample is 100 percent Hispanic (by plan). The sample is characterized by unusually high proportions of teens living with neither parent, a high rate of school dropouts, lengthly educational gaps, and limited experience with birth control. Members of the Boston sample also had unusually low self-esteem, internal locus of control, birth control knowledge, employment readiness, and "career maturity." The Boston teens also had modest service utilization rates. Overall, the baseline data suggest that the Boston program is dealing with an exceptionally disadvantaged set of girls.

Harlem respondents tended to show the most positive scores on many of the dimensions for which Boston was low. The Harlem group had the best school record, the highest scores on the birth control knowledge and employability knowledge tests, and high rates of service use, including medical care.

Detroit was similar to New York on many of the variables included in this list of 30. Detroit respondents had a better-than-average baseline profile with respect to educational variables, birth control utilization and self-esteem. Phoenix girls, on the other hand, had a relatively poor educational and contraceptive record but performed well on the Career Maturity Test and had higher rates of current job experience.

TABLE A.2

COMPARISON OF EXPERIMENTAL AND COMPARISON GROUP MEMBERS ON SELECTED VARIABLES AT BASELINE, BY SITE

	Percentages or Means, by Group and Site								
	Experimental Group				Comparison Group				
Variable	Boston	Harlem	East Detroit	Phoenix	Hartford	Bedford Stuyvesant	West Detroit	San Antonio	All Sites
● Demographic									
Mean Age	15.4	16.2	16.0	15.7	15.9	16.0	16.4	15.8	15.9****(514)[a]
Percent Never Married	75.0	96.4	98.6	88.6	98.4	97.4	97.4	79.8	92.6****(476)
Percent Pregnant, Not a Parent	69.4	50.0	33.3	56.2	57.1	71.0	14.1	61.8	49.8****(256)
Percent Black	0.0	98.2	100.0	47.2	0.0	96.8	100.0	39.3	66.0****(339)
Percent Hispanic	100.0	1.8	0.0	40.4	100.0	3.2	0.0	57.3	31.3****(161)
● Educational									
Percent in School at Baseline	13.9	66.1	57.4	44.8	36.7	79.0	43.3	71.9	56.4****(285)
Mean Highest Grade Completed	7.7	8.7	8.7	8.6	8.4	8.5	9.3	8.2	8.6****(497)
Percent of Dropouts Planning to Return	86.2	94.7	100.0	91.7	60.9	92.3	94.4	76.0	87.4* (188)
Percent Dropped Out More Than 12 Months Before Interview	45.2	21.1	15.4	46.9	54.5	54.5	32.4	40.0	38.7* (84)
Percent Wanting More Than High School Diploma/GED	50.0	56.4	56.1	42.9	14.3	62.3	63.6	19.3	47.3****(230)
● Employment									
Percent Employed at Baseline	2.8	3.6	7.2	9.0	0.0	4.8	5.1	16.9	7.4* (38)
Mean Number of Jobs Held	1.5	1.1	1.1	1.3	.9	1.1	1.0	1.1	1.1 (514)
Mean Score, Career Maturity Scale	17.4	19.6	19.3	20.3	17.0	19.2	19.2	18.2	19.0** (507)
Mean Score, Employability Knowledge Test	9.4	12.1	10.3	11.3	8.4	11.7	10.6	9.8	10.7****(507)
● Family Planning/ Fertility									
Mean Number of Pregnancies	1.2	1.3	1.3	1.1	1.3	1.4	1.4	1.2	1.2** (513)
Percent Ever Used Birth Control	33.3	53.6	73.9	38.2	51.4	51.6	75.6	44.9	53.7****(276)
Mean Number of Birth Control Methods Used	.6	.8	1.0	.5	.6	.8	1.1	.5	1.3** (276)
Mean Score, Birth Control Knowledge Test	6.9	10.4	9.6	8.7	7.1	9.9	8.9	9.3	9.1****(512)

continued

TABLE A.2

	Percentages or Means, by Group and Site								
	Experimental Group				Comparison Group				
Variable	Boston	Harlem	East Detroit	Phoenix	Hartford	Bedford Stuyvesant	West Detroit	San Antonio	All Sites
• Service/Supports									
Mean Number of Services Used	4.9	6.2	6.3	6.0	6.6	8.2	5.1	4.3	5.9****(514)
Mean Number of Services Needed	6.4	6.9	7.8	5.5	4.0	4.7	5.6	6.7	6.1****(514)
Percent Having Been in Teen Parent Program	8.3	25.0	20.3	16.3	32.4	64.5	34.6	21.3	27.8****(142)
Mean Number of Mentions in Support Network	3.3	2.7	3.3	3.4	3.2	3.5	2.9	3.0	3.3 (514)
• Health-Related									
Mean Days in Hospital for Childbirth	4.3	3.7	3.9	2.9	5.7	3.9	3.8	3.9	3.9 (251)
Mean Weight of Infants in Ounces	106.2	108.6	104.6	102.1	98.3	109.3	102.8	107.6	104.6 (248)
Percent Having Visited Doctor Since Birth	81.8	100.0	97.7	89.7	60.0	83.3	89.6	78.8	88.2** (224)
• Psychology									
Mean Self-Esteem Score	18.0	19.1	19.2	18.7	18.5	19.6	20.3	18.4	19.1****(507)
Mean Locus-of-Control Score	13.6	13.7	13.8	14.3	13.2	13.5	14.1	13.6	13.8 (501)
• Home Environment									
Mean Number of Siblings	5.8	4.2	5.9	5.0	6.0	4.7	4.4	6.2	5.2*** (502)
Percent With Neither Parent Present at Baseline	61.8	20.4	16.2	24.7	58.8	22.6	16.7	19.1	25.3****(130)
Percent in AFDC Household	91.7	80.4	86.8	64.4	97.1	72.6	93.5	62.9	78.1****(399)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: The order in which the experimental sites is presented corresponds to the order for the matched comparison sites (i.e., Hartford is the comparison site match for Boston; Bedford-Stuyvesant for Harlem, etc.).

[a] Frequencies by site are presented in the tables in Appendix B (Tables B.9 to B.40). The numbers in parentheses represent frequencies on which the statistic is based for the sample as a whole. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

****Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .0001 level.

The question that arises is whether these are genuine inter-site differences among the experimental sites, or differences that can be explained by a few basic factors, such as ethnicity and the age of the respondents. To address this issue, we conducted a hierarchical regression analysis, with 27 of the 30 variables as the dependent variables. Ethnicity and age were entered first as covariates, followed by the set of three dummy variables used to characterize the experimental sites (Boston, Harlem, Detroit East, and Phoenix).[4] The statistic of interest was the increment in explained variance (R^2) that resulted from adding "site" as an explanatory factor. The results are shown in Table A.3.

We inspected the results for situations in which the increment to R^2 as a result of adding the site variables was statistically significant. Thirteen of the 27 variables met this criterion, as shown in Table A.3. Differences tended to cut across a range of variables, including demographic characteristics, educational variables, contraceptive behaviors, employment/income characteristics, service needs, and family characteristics. Thus, it is clear that differences among the experimental sites exist. Certainly the milieux of the four cities are quite dissimilar. We can also expect that there will be differences in the way the program operates in the four sites; the program differences may in fact be substantial. The conclusion is that part of the impact analysis must be devoted to site-specific investigations (including the nature of the program in each site), both to avoid ecological fallacies and to increase our understanding of what Project Redirection elements work and for whom. In the next section, we look at the extent to which such site-specific analyses are supported by the goodness-of-fit of the matched experimental/comparison pairs.

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[4] Ethnicity was entered using a contrast coding scheme. One variable contrasted Hispanic and black (codes: black = +1, Hispanic = -1, white = 0). The other variable contrasted minority with majority (codes: black = +.5, Hispanic = +.5, white = -1). The sites were entered using dummy codes (0/1), with Phoenix serving as the reference group. Notation and terminology for the regression procedures follow Cohen and Cohen (1975).

TABLE A.3

VARIANCE ACCOUNTED FOR IN MULTIPLE REGRESSION ANALYSES ON SELECTED VARIABLES BY AGE, ETHNICITY, AND SITES

Variable	R^2 Attributable to Age and Ethnicity[a]	R^2 Attributable to Age, Ethnicity and Sites[b]	Increment to R^2 Contributed By Adding Sites	Proportion of R^2 Attributable to Sites[c]
• Demographic				
Percent Never Married	.068	.148	.080***	.54
Percent Pregnant, Not a Parent	.034	.073	.039*	.53
• Educational				
Percent in School at Baseline	.186	.199	.013	.07
Mean Highest Grade Completed	.414	.450	.036**	.08
Percent of Dropouts Planning to Return	.100	.110	.010	.09
Percent Who Left School More Than 12 Months Before Baseline Interview	.135	.155	.020	.13
Percent Wanting More Than High School Diploma/GED	.016	.027	.011	.41
• Employment				
Percent Employed at Baseline	.026	.059	.033*	.56
Mean Number of Jobs Held	.079	.115	.036*	.31
Mean Score, Career Maturity Scale	.049	.066	.017	.26
Mean Score, Employability Knowledge Test	.025	.068	.043*	.63
• Family Planning/Fertility				
Mean Number of Pregnancies	.026	.050	.024	.48
Percent Ever Used Birth Control	.066	.128	.062**	.48
Mean Number of Birth Control Methods Used	.045	.087	.042	.48
Mean Score, Birth Control Knowledge Test	.188	.215	.027*	.13
• Services/Supports				
Mean Number of Services Used	.016	.018	.002	.11
Mean Number of Services Needed	.030	.063	.033*	.52
Percent Having Been in Teen Parent Program	.042	.046	.004	.09
Mean Number of Mentions in Support Network	.004	.036	.032*	.89
• Health				
Mean Days in Hospital for Childbirth	.009	.065	.056	.86
Mean Weight of Infants in Ounces	.005	.017	.012	.71
Percent Having Visited Doctor Since Birth	.039	.062	.023	.37
• Psychological				
Mean Self-Esteem Score	.069	.071	.002	.03
Mean Locus-of-Control Score	.019	.035	.016	.46
• Home Environment				
Mean Number of Siblings	.015	.051	.036*	.71
Percent With Neither Parent in Household	.111	.148	.037*	.25
Percent in AFDC Household	.003	.078	.075***	.96

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: R^2 represents the proportion of variance accounted for by the combined effects of several independent variables considered simultaneously in a multiple regression analysis.

[a] Ethnicity was entered using the following contrast coding scheme: blacks = + 1, Hispanics = -1, Whites = 0; and blacks = + .5, Hispanics = + .5, Whites = -1 (for contrasting majority and minority respondents).

[b] The 4 sites were entered using dummy codes (0/1), with Phoenix serving as the reference group.

[c] The proportions in the fourth column were derived by dividing the proportions in column 3 by the proportions in column 2.

*Two-tailed F-test for the proportion of variance contributed by including sites is statistically significant at the .05 level.

**Two-tailed F-test for the proportion of variance contributed by including sites is statistically significant at the .01 level.

***Two-tailed F-test for the proportion of variance contributed by including sites is statistically significant at the .001 level.

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2. The Experimental and Comparison Pairs

To examine the match between the four pairs of experimental and comparison sites, we again used a regression approach, with the basic set of 27 variables as the dependent variables, age and ethnicity[5] stepped in first as the covariates, and experimental vs. comparison group as the independent variable. These analyses were replicated four times, once for each pair of matched sites. Table A.4 shows those variables that are prospective sources of noncomparability for each pair--that is, variables for which there was a significant group difference (at the .05 level) after removing the effects of the covariates.[6] For each variable, the two group means are presented, together with the F value for the test of the main effects, and the associated p value.

Comments about each of the pairs are presented below:

Boston/Hartford. The experimental group had a less favorable educational profile than the comparison sample, complicating the interpretation of educational outcomes. Job experience was greater for the experimental group (probably linked to the higher school dropout situation). The Boston group had used fewer services in the preceding three months, and thought they needed more than the girls in Hartford. This probably reflects the fact that Hartford teens were more likely to have had experience in a teen parent program. Otherwise, the match was fairly close.

Harlem/Bedford-Stuyvesant. Except for the fact that more of the Bedford-Stuyvesant teens were about to give birth to their first child than the girls in Harlem, all of the differences in the New York sample related to services and supports. The Bedford-Stuyvesant respondents had had more services, had fewer service needs, and had more informal supports than the Harlem respondents (who, nevertheless, had a higher rate of postpartum medical care).

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[5] Ethnicity was used as a covariate in the Phoenix/San Antonio analyses only, since ethnicity did not vary within the other sites.

[6] Appendix B includes comparisons of the four pairs of sites on a more comprehensive set of variables.

TABLE A.4

VARIABLES FOR WHICH SIGNIFICANT DIFFERENCES EMERGED IN MATCHED EXPERIMENTAL/COMPARISON SITES AT BASELINE

Matched Sites	Variable	Percentage or Mean		
		Experimental Group	Comparison Group	Absolute Difference[a]
Boston/ Hartford	Percent in School at Baseline	13.9	36.7	22.8*
	Mean Highest Grade Completed	7.7	8.4	0.7*
	Percent Wanting More Than Diploma/GED	50.0	14.3	35.7**
	Mean Number of Jobs	1.5	.9	0.6*
	Mean Number of Services Used	4.9	6.6	1.7*
	Mean Number of Services Needed	6.4	4.0	1.4***
	Percent Having Been in Teen Parent Program	8.3	32.4	24.1**
Harlem/ Bedford-Stuyvesant	Percent Pregnant, Not a Parent	50.0	71.0	21.0*
	Mean Number of Services Used	6.2	8.2	2.0**
	Mean Number of Services Needed	6.9	4.7	2.2***
	Percent Having Been in Teen Parent Program	25.0	64.5	39.5***
	Mean Number in Support Network	2.7	3.5	0.8**
	Percent Visited Doctor Since Birth	100.0	83.3	16.7*
Detroit East/ Detroit West	Percent Pregnant, Not a Parent	33.3	41.1	19.2**
	Mean Number of Services Needed	7.8	5.6	2.2***
	Mean Self-Esteem Score	19.2	20.3	1.1*
	Mean Number of Siblings	5.9	4.4	1.5**
Phoenix/ San Antonio	Percent Never Married	98.9	79.8	19.1***
	Percent in School at Baseline	44.8	71.9	27.1***
	Mean Highest Grade Completed	8.6	8.2	0.4**
	Percent Wanting More Than Diploma/GED	42.9	19.3	23.6**
	Mean Score, Career Maturity Scale	10.3	18.2	2.1*
	Mean Score, Employability Knowledge Test	11.3	9.8	1.6**
	Mean Number of Services Used	6.0	4.3	1.7**
	Mean Number of Services Needed	5.5	6.7	1.2**

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]The figure in the last column represents the differences in the means or percentages between the experimental and comparison groups, irrespective of the direction of the differences.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

East Detroit/West Detroit. The experimental respondents were more likely to be mothers, needed more services, came from larger families, and had worse scores on the Self-Esteem Test than the comparison teens. These are fairly minor differences on very few variables.

Phoenix/San Antonio. Phoenix/San Antonio is the most problematic pair because differences between the experimental and comparison groups were found for several important variables. The experimental group was less likely to be married, and had more school dropouts. The Redirection participants also had higher scores on the Career Maturity and Employment Knowledge tests, and had used more services (and needed fewer) than the comparison group. The match for Phoenix and San Antonio thus seems less attractive than that for the other three pairs of sites. This is not really surprising, inasmuch as the match procedure was much smoother for the other three pairs.[7] Furthermore, it would certainly be expected that at least the Harlem/Bedford-Stuyvesant and Detroit East/Detroit West combinations would work well since the sites in these pairs are essentially neighboring communities. However, the larger number of significant differences in the Phoenix/San Antonio match may be somewhat misleading: the sample size for this subgroup (N=178) is larger than for other subgroups, and therefore differences achieve significance more readily.

In summary, the magnitude of the differences among the four experimental sites relating to participant characteristics suggest the desirability of performing some site-specific analyses. The paired-site analyses, however, revealed some areas of experimental/comparison noncomparability that would need to be controlled in any of these site analyses. For certain sites--Boston/Hartford in particular--the sample size is probably inadequate for any meaningful analysis of impact, particularly if a large number of covariates are needed to control for pre-existing differences. For sites such as Phoenix/San Antonio, the sample size will probably be adequate to support some analyses of program impact.

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[7] In selecting comparison sites, finding an appropriate match for Phoenix was more difficult than for other sites. Part of the difficulty was finding a city with an ethnic composition compatible with anticipated ethnic enrollments in Phoenix. Another obstacle was identifying a city with as few social services as Phoenix.

C. The Impact of Delayed Baseline Interviewing

The original plan for conducting the baseline interviews of Project Redirection participants called for the interviews to occur around the time that the participants signed their IPP (Individual Participation Plan). This document was to have been signed within 30 days after the teens' enrollment in the program. The goal was to complete the baseline interview within 45 days of enrollment, or two weeks subsequent to the signing of the IPP.[8] For a number of reasons, neither goal was attained, particularly in the early phase of the program. That is, the IPP was not always signed within 30 days of enrollment, and the interview was not always conducted within 45 days of enrollment. The mean time elapsed between enrollment and the interview was 64.2 days and the median was 59.6 days. The majority of interviews (58.4 percent), in fact, was administered after the target date of 45 days. Delays were particularly marked in certain sites. The mean number of days between enrollment and the interviews for the four program sites was as follows:

Boston:	34.9 days	(N=36)
Harlem:	76.1 days	(N=56)
Detroit East:	65.3 days	(N=69)
Phoenix:	68.1 days	(N=89)

Although the teens were not officially activated in the program until they signed their IPP, they nevertheless began to receive some services when they enrolled. Because of this fact, a potential bias may have been introduced by conducting the interview so long after enrollment. That is, the data collected from respondents in the belated interviews may not actually reflect incoming characteristics.

Although there is no direct means of determining whether such a bias is present, we looked for evidence of this bias by comparing "early respondents" (those interviewed within 45 days of enrollment) and "later respondents" (those interviewed after 45 days) on the set of 30 variables used throughout this chapter. The results are shown in Table A.5. As this table indicates, there are only a handful of significant differences, and these differences are related primarily to site variation that was planned. Thus, Boston girls are disproportionately represented among "early respondents," and a higher percentage of respondents in the early group is Hispanic. The converse is true for blacks, and Detroit.

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[8] The interview was deliberately not conducted immediately after enrollment because a girl's enrollment did not constitute actual initiation into the program. In fact, girls who enrolled but who terminated within 30 days were not eligible for inclusion in the sample.

The important point is that the two groups were not significantly different in terms of services used and needed and in terms of outcome variables that could have been affected by service receipt prior to the interview (e.g., school attendance, birth control usage). These data suggest that, whatever the nature and intensity of the contact between programs and participants in the first few months, its impact is not substantial. Futhermore, based on our discussions with field representatives from MDRC and program personnel, it is unlikely that the contact itself was substantial, particularly during the start-up phase of program operations. In summary, the delayed interviewing appears not to have created a bias of a measurable magnitude.

TABLE A.5

COMPARISON OF EARLY AND LATER[a] PROJECT REDIRECTION RESPONDENTS ON SELECTED VARIABLES AT BASELINE

Variable	Percentages or Means, by Group		
	Early Respondents	Later Respondents	All Redirection Respondents
• Demographic			
Mean Age in Years	15.9 (104)	15.9 (146)	15.9 (250)
Percent Never Married	93.3 (97)	95.9 (140)	94.8 (237)
Percent Pregnant, Not a Mother	52.9 (55)	48.6 (71)	50.4 (126)
Percent Black	58.7 (61)	71.9 (105)	66.4* (166)
Percent Hispanic	38.5 (40)	22.6 (33)	29.2** (73)
• Educational			
Percent in School at Baseline	45.2 (47)	51.0 (73)	48.6 (120)
Mean Highest Grade Completed	8.6 (99)	8.5 (138)	8.5 (237)
Percent of Dropouts Planning to Return	90.2 (46)	94.0 (63)	92.4 (109)
Percent Dropped Out More Than 12 Months Before Interview	36.4 (20)	35.7 (25)	36.0 (45)
Percent Wanting More Than High School Diploma/GED	51.0 (50)	50.4 (70)	50.6 (120)
• Employment			
Percent Employed at Baseline	5.8 (6)	6.8 (10)	6.4 (16)
Mean Number of Jobs Held	1.2 (104)	1.2 (146)	1.2 (250)
Mean Score, Career Maturity Scale	19.3 (103)	19.5 (142)	19.5 (245)
Mean Score, Employability Knowledge Test	11.0 (104)	10.8 (144)	10.9 (248)
• Family Planning/Fertility			
Mean Number of Pregnancies	1.2 (104)	1.2 (146)	1.2 (250)
Percent Ever Used Birth Control	45.2 (47)	54.8 (80)	50.8 (127)
Mean Number of Birth Control Methods Used	0.7 (104)	0.7 (146)	0.7 (250)
Mean Score, Birth Control Knowledge Test	8.6 (103)	9.0 (145)	9.0 (248)
• Services/Supports			
Mean Number of Services Used	5.8 (104)	6.1 (146)	6.0 (250)
Mean Number of Services Needed	7.0 (104)	6.3 (146)	6.6 (250)
Percent Participated in Teen Parent Program	17.6 (18)	18.6 (27)	18.2 (45)
Mean Number of Mentions in Support Network	3.3 (104)	3.1 (146)	3.2 (250)
• Health-Related			
Mean Days in Hospital, Childbirth	3.8 (47)	3.4 (72)	3.6 (119)
Mean Weight of Infants (Ounces)	106.7 (46)	103.6 (71)	104.8 (117)
Percent Having Visited Doctor Since Birth	91.7 (44)	95.9 (70)	94.2 (114)
• Psychology			
Mean Self-Esteem Score	19.1 (103)	18.6 (143)	18.9 (246)
Mean Locus of Control Scale	13.9 (102)	14.0 (141)	14.0 (243)
• Home Environment			
Mean Number of Siblings	5.2 (101)	5.2 (143)	5.2 (244)
Percent With Neither Parent in Household	30.8 (32)	26.0 (38)	28.0 (70)
Percent in AFDC Household	71.8 (74)	81.5 (119)	77.5 (193)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]Early respondents are those Project Redirection participants who were interviewed within 45 days of their enrollment in the program. Later respondents are those Redirection participants who were interviewed more than 45 days after enrollment.

[b]The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*A two-tailed chi-square test for this distribution is statistically significant at the .05 level.

**A two-tailed chi-square test for this distribution is statistically significant at the .01 level

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APPENDIX B

TABLE B.1

COMPARISON OF EXPERIMENTAL AND COMPARISON GROUP MEMBERS ON SELECTED DEMOGRAPHIC VARIABLES AT BASELINE

	Percentage or Mean, by Group					
Variable	Experimental Group		Comparison Group		Both Groups	
Mean Age	15.9	(250)[a]	16.0	(264)	15.9	(514)
Percent Black	66.4	(166)	65.5	(173)	66.0	(339)
Percent Hispanic	29.2	(73)	33.3	(88)	31.3	(161)
Percent Pregnant, not a Parent	50.4	(126)	49.2	(130)	49.8	(256)
Percent With More Than 1 Child	4.9	(12)	7.2	(19)	6.1	(31)
Percent Never Married	94.8	(237)	90.5	(239)	92.6	(476)
Mean Age at Marriage (Ever Marrieds)	15.1	(13)	15.1	(19)	15.1	(32)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: None of the group comparisons is statistically significant (using two-tailed chi-square tests for comparing percentages and two-tailed t-test for comparing means) at or beyond the .05 level.

[a] The numbers in parentheses represent frequencies on which the statistic is based. For means the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

TABLE B.2

COMPARISON OF EXPERIMENTAL AND COMPARISON GROUP MEMBERS ON SELECTED EDUCATIONAL VARIABLES AT BASELINE

	Percentage or Mean, by Group					
Variable	Experimental Group		Comparison Group		Both Groups	
Percent in School at Baseline	48.6	(120)	64.0	(165)	56.4 ***	(285)
Percent of Mothers in School at Baseline	48.8	(60)	54.9	(73)	52.0	(133)
Percent in Teen Parent School Program at Baseline	37.7	(46)	35.2	(58)	36.2	(104)
Percent Who Left School More Than 12 Months Before Baseline Interview	36.0	(55)	42.4	(39)	38.7	(84)
Percent of Dropouts Planning to Return	92.4	(109)	81.4	(79)	87.4 *	(188)
Mean Highest Grade Completed	8.5	(237)	8.6	(260)	8.6	(497)
Percent in School When Pregnancy Discovered	65.1	(157)	77.6	(201)	71.6 **	(358)
Percent Returned to School After Birth of Child	56.7	(68)	59.8	(79)	58.3	(147)
Percent in General School Program	70.6	(175)	62.4	(164)	66.3 *	(339)
Percent With Absentee Rate More Than Five Days per Month	24.1	(60)	26.2	(69)	25.2	(129)
Percent With Math Grade Below C	19.6	(48)	16.3	(43)	17.9	(91)
Percent With English Grade Below C	11.4	(28)	9.5	(25)	10.5	(53)
Percent Wanting More Than High School Diploma/GED	51.5	(122)	43.4	(108)	47.3	(230)
Percent Believing Achievement of Education Goals is Very Likely	52.5	(124)	52.0	(129)	52.3	(253)
Percent Mentioning Schooling as Goal for Self	17.2	(43)	14.4	(38)	15.8	(81)
Percent Mentioning Schooling as Goal for Child	70.4	(176)	73.9	(195)	72.2	(371)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

TABLE B.3

COMPARISON OF EXPERIMENTAL AND COMPARISON GROUP MEMBERS ON SELECTED EMPLOYMENT-RELATED VARIABLES AT BASELINE

	Percentage or Mean, by Group					
Variable	Experimental Group		Comparison Group		Both Groups	
Percent Employed at Baseline	6.4	(16)[a]	8.3	(22)	7.4	(38)
Percent Never Having Worked (Excluding Babysitting)	45.2	(113)	39.8	(105)	42.4	(218)
Mean Number of Jobs Held (Including Babysitting)	24.8	(62)	26.9	(71)	25.9	(133)
Mean Number of Types of Training	19.2	(48)	28.0	(74)	23.7 *	(122)
Mean Score, Career Maturity Scale	34.0	(85)	45.8	(121)	40.1 **	(206)
Mean Score, Employability Knowledge Test	1.2	(250)	1.0	(264)	1.1 *	(514)
Mean Score, Training Requirements Test	2.6	(250)	2.8	(264)	2.7	(514)
Mean Score, Attitudes Toward Non-Traditional Employment	19.5	(245)	18.6	(262)	19.0 *	(507)
Percent Mentioning Job as Goal For Self	10.9	(248)	10.4	(259)	10.7	(507)
Percent Mentioning Specific Job as Goal For Self	5.9	(242)	6.4	(254)	6.2	(496)
Percent Mentioning Job as Goal For Child	14.1	(248)	13.7	(259)	13.9	(507)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.4

COMPARISON OF EXPERIMENTAL AND COMPARISON GROUP MEMBERS ON SELECTED FAMILY PLANNING/FERTILITY VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Experimental Group		Comparison Group		Both Groups	
Mean Number of Pregnancies	1.2	(250)[a]	1.3	(263)	1.3*	(513)
Percent Pregnant More Than One Time	20.0	(50)	27.0	(106)	23.6	(121)
Percent Ever Miscarried	4.8	(12)	7.2	(19)	6.0	(31)
Percent Ever Aborted	6.0	(15)	10.3	(27)	8.2	(42)
Percent Never Wanting Another Child	29.6	(73)	24.2	(64)	26.8	(137)
Percent in a Sexual Relationship at Baseline	41.7	(103)	41.3	(299)	41.5	(212)
Percent Ever Used Birth Control	50.8	(127)	56.4	(149)	53.7	(276)
Mean Number of Birth Control Methods Used	1.4	(127)	1.3	(149)	1.3	(276)
Percent of Contraceptors Using the Pill, Last Intercourse	53.8	(43)	53.1	(51)	53.4	(94)
Mean Score, Birth Control Knowledge Test	9.1	(248)	9.0	(264)	9.1	(512)
Mean Score, Ease of Access to Birth Control Scale	12.3	(176)	12.2	(153)	12.3	(329)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

TABLE B.5

COMPARISON OF EXPERIMENTAL AND COMPARISON GROUP MEMBERS ON SELECTED SERVICE-AND-SUPPORT-RELATED VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Experimental Group		Comparison Group		Both Groups	
Mean Number of Services Used	6.0	(250)[a]	5.8	(264)	5.9	(514)
Mean Number of Services Needed	6.6	(200)	5.6	(264)	6.1 **	(514)
Percent Having Been in Teen Parent Program	18.2	(45)	36.9	(97)	27.8 ***	(142)
Mean Number of Mentions in Support Network	3.3	(250)	3.2	(264)	3.3	(514)
Percent With Close Friends Nearby	71.6	(179)	73.1	(193)	72.4	(372)
Percent Still in Contact With Baby's Father	71.6	(179)	70.5	(186)	71.0	(365)
Percent Using Their Mother for Child Care While in School	61.9	(52)	60.5	(49)	61.2	(101)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

TABLE B.6

COMPARISON OF EXPERIMENTAL AND COMPARISON GROUP MEMBERS ON SELECTED HEALTH-RELATED VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Experimental Group		Comparison Group		Both Groups	
Percent Having Visited Doctor During First Three Months of Pregnancy	74.1	(100)[a]	72.5	(103)	73.3	(203)
Percent Having Visited Doctor More Than Five Times During Pregnancy	68.2	(90)	66.4	(91)	67.3	(181)
Percent With Problem This Pregnancy	37.8	(51)	36.6	(52)	37.2	(103)
Percent of Babies Leaving Hospital With Mother After Birth	78.3	(94)	80.0	(108)	79.2	(202)
Percent Having Visited Doctor Since Birth	94.2	(114)	82.7	(110)	88.2 **	(224)
Percent With Problem After Childbirth	26.1	(31)	18.8	(25)	22.2	(56)
Percent of Babies With Problem Since Birth	27.7	(33)	23.3	(31)	25.4	(64)
Percent of Babies Having Had Checkup During First Six Months	96.7	(117)	89.6	(120)	92.9 *	(237)
Mean Number of Days in Hospital for Childbirth	3.6	(119)	4.1	(132)	3.9	(251)
Mean Weight of Infant, in Ounces	104.8	(117)	104.4	(131)	104.6	(248)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.7

COMPARISON OF EXPERIMENTAL AND CONTROL GROUP MEMBERS ON SELECTED PSYCHOLOGICAL FACTORS AT BASELINE

Variable	Percentage or Mean, by Group					
	Experimental Group		Comparison Group		Both Groups	
Mean Locus-of-Control Score	14.0	(243)[a]	13.7	(258)	13.8	(501)
Mean Self-Esteem Score	18.9	(246)	19.2	(261)	19.1	(507)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: Neither of the group comparisons is statistically significant at the .05 level, using a two-tailed t-test.

[a] The numbers in parentheses represent the number of respondents contributing to the calculation of the mean.

TABLE B.8

COMPARISON OF EXPERIMENTAL AND COMPARISON GROUP MEMBERS ON SELECTED HOME ENVIRONMENT VARIABLES AT BASELINE

	Percentage or Mean, by Group					
Variable	Experimental Group		Comparison Group		Both Groups	
Percent With Both Parents Present During Childhood	16.1	(40)[a]	20.5	(54)	18.3	(94)
Percent With Mother Present at Baseline	70.2	(172)	73.8	(194)	72.0	(366)
Percent With Father Present at Baseline	18.0	(44)	15.2	(40)	16.5	(84)
Percent With Neither Parent Present at Baseline	26.5	(66)	24.3	(64)	25.3	(130)
Mean Number of Household Members at Baseline	5.6	(249)	5.7	(264)	5.6	(513)
Mean Number of Siblings	5.2	(244)	5.3	(258)	5.2	(502)
Percent With Mothers Who Gave Birth at 19 or Younger	70.4	(176)	67.4	(179)	68.9	(354)
Percent With Mothers With Less Than High School Diploma	58.3	(120)	62.9	(144)	60.7	(264)
Percent With One or More Household Members on AFDC	77.5	(193)	78.6	(206)	78.1	(399)
Percent With Household Income Equal to or More Than $400 per Month	41.0	(102)	42.7	(112)	41.9	(214)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: None of the group comparisons is statistically significant (using two-tailed chi-square tests for comparing percentages and two-tailed t-test for comparing means) at or beyond the .05 level.

[a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

TABLE B.9

COMPARISON OF BOSTON AND HARTFORD RESPONDENTS ON SELECTED DEMOGRAPHIC VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Boston Experimental Group		Hartford Control Group		Both Sites	
Mean Age	15.4	(36)[a]	15.9	(35)	15.6	(71)
Percent Black	0.0	(0)	0.0	(0)	0.0	(0)
Percent Hispanic	100.0	(36)	100.0	(35)	100.0	(71)
Percent Pregnant, not a Parent	69.4	(25)	57.1	(20)	63.4	(45)
Percent With More Than 1 Child	0.0	(0)	17.6	(6)	8.8 *	(6)
Percent Never Married	75.0	(27)	88.6	(31)	81.7	(58)
Mean Age at Marriage (Ever Marrieds)	14.7	(9)	15.0	(2)	14.7	(11)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

TABLE B.10

COMPARISON OF BOSTON AND HARTFORD RESPONDENTS ON SELECTED EDUCATIONAL VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group		
	Boston Experimental Group	Hartford Control Group	Both Sites
Percent in School at Baseline	13.9 (5)[a]	36.7 (11)	24.2 (16)
Percent of Mothers in School at Baseline	9.1 (1)	14.3 (2)	12.0 (3)
Percent in Teen Parent School Program at Baseline	50.0 (3)	66.7 (8)	61.1 (11)
Percent Who Left School More Than 12 Months Before Baseline Interview	45.2 (14)	54.5 (12)	49.1 (26)
Percent Of Dropouts Planning to Return	86.2 (25)	60.0 (14)	75.0 (39)
Mean Highest Grade Completed	7.7 (34)	8.4 (34)	8.0 * (68)
Percent in School When Pregnancy Discovered	44.4 (16)	54.3 (19)	49.3 (35)
Percent Returned to School After Birth of Child	27.3 (3)	20.0 (3)	23.1 (6)
Percent in General School Program	83.3 (30)	85.7 (30)	84.5 (60)
Percent With Absentee Rate More Than Five Days per Month	25.0 (9)	51.4 (18)	38.0 * (27)
Percent With Math Grade Below C	16.7 (6)	23.5 (8)	20.0 (14)
Percent With English Grade Below C	8.3 (3)	9.1 (3)	8.7 (6)
Percent Wanting More Than High School Diploma/GED	50.0 (16)	14.3 (4)	33.3 * (20)
Percent Believing Achievement of Education Goals is Very Likely	29.0 (9)	44.4 (12)	36.2 (21)
Percent Mentioning Schooling as Goal for Self	33.3 (12)	14.3 (5)	23.9 (17)
Percent Mentioning Schooling as Goal for Child	58.3 (21)	88.6 (31)	73.2 ** (52)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.11

COMPARISON OF BOSTON AND HARTFORD RESPONDENTS ON SELECTED EMPLOYMENT-RELATED VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Boston Experimental Group		Hartford Control Group		Both Sites	
Percent Employed at Baseline	2.8	(1)[a]	0.0	(0)	1.4	(1)
Percent Never Having Worked (excluding Babysitting)	33.3	(12)	51.4	(18)	42.3	(30)
Mean Number of Jobs Held (Including Babysitting	1.5	(36)	.9	(35)	1.2*	(71)
Mean Number of Types of Training	2.3	(36)	1.3	(35)	1.8	(71)
Mean Score, Career Maturity Scale	17.4	(36)	17.0	(35)	17.2	(71)
Mean Score, Employability Knowledge Test	9.4	(36)	9.4	(35)	9.4	(71)
Mean Score, Training Requirements Test	3.7	(36)	7.7	(35)	5.6***	(71)
Mean Score, Attitudes Toward Non-Traditional Employment	12.4	(36)	13.3	(34)	12.8	(70)
Percent Mentioning Job as Goal for Self	38.9	(14)	34.3	(12)	36.6	(26)
Percent Mentioning Specific Job as Goal for Self	25.0	(9)	11.4	(4)	18.3	(13)
Percent Mentioning Job as Goal for Child	16.7	(6)	22.9	(8)	19.7	(14)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

TABLE B.12

COMPARISON OF BOSTON AND HARTFORD RESPONDENTS ON SELECTED FAMILY PLANNING/FERTILITY VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Baston Experimental Group		Hartford Control Group		Both Sites	
Mean Number of Pregnancies	1.2	(36)[a]	1.3	(35)	1.2	(71)
Percent Pregnant More Than One Time	16.7	(6)	22.9	(8)	19.7	(14)
Percent Ever Miscarried	11.1	(4)	2.9	(1)	7.0	(5)
Percent Ever Aborted	0.0	(0)	2.9	(1)	1.4	(1)
Percent Never Wanting Another Child	30.6	(11)	14.3	(5)	22.5	(16)
Percent in a Sexual Relationship at Baseline	50.0	(18)	28.6	(10)	39.4	(28)
Percent Ever Used Birth Control	33.3	(12)	51.4	(18)	42.3	(30)
Mean Number of Birth Control Methods Used	.6	(36)	.6	(35)	.6	(71)
Percent of Contraceptors Using the Pill, Last Intercourse	50.0	(3)	38.5	(5)	42.1	(8)
Mean Score, Birth Control Knowledge Test	6.9	(35)	7.1	(35)	7.0	(70)
Mean Score, Ease of Access to Birth Control Scale	11.6	(16)	13.3	(11)	12.3	(27)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: None of the group comparisons is statistically significant (using two-tailed chi-square tests for comparing percentages and two-tailed t-test for comparing means) at or beyond the .05 level.

[a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

TABLE B.13

COMPARISON OF BOSTON AND HARTFORD RESPONDENTS ON SELECTED SERVICE-AND-SUPPORT-RELATED VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group		
	Boston Experimental Group	Hartford Control Group	Both Sites
Mean Number of Services Used	4.9 (36)[a]	6.6 (35)	5.8* (71)
Mean Number of Services Needed	6.4 (36)	4.0 (35)	5.2**(71)
Percent Having Been in Teen Parent Program	8.3 (3)	32.4 (11)	20.0* (14)
Mean Number of Mentions in Support Network	3.3 (36)	3.2 (35)	3.3 (71)
Percent With Close Friends Nearby	63.9 (23)	62.9 (22)	63.4 (45)
Percent Still in Contact With Baby's Father	80.6 (29)	82.9 (29)	81.7 (58)
Percent Using Their Mother for Child Care While in School	100.0 (4)	100.0 (3)	100.0 (7)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.14

COMPARISON OF BOSTON AND HARTFORD RESPONDENTS ON SELECTED HEALTH-RELATED VARIABLES AT BASELINE

	Percentage or Mean, by Group		
Variable	Boston Experimental Group	Hartford Control Group	Both Sites
Percent Having Visited Doctor During First Three Months of Pregnancy	27.3 (3)[a]	73.3 (11)	53.8 * (14)
Percent Having Visited Doctor More Than Five Times During Pregnancy	80.0 (8)	100.0 (15)	92.0 (23)
Percent With Problem This Pregnancy	72.7 (8)	53.3 (8)	61.5 (16)
Percent of Babies Leaving Hospital With Mother After Birth	81.8 (9)	81.3 (13)	81.5 (22)
Percent Having Visited Doctor Since Birth	81.8 (9)	60.0 (9)	69.2 (18)
Percent With Problem After Childbirth	54.5 (6)	40.0 (6)	46.2 (12)
Percent of Babies With Problem Since Birth	36.4 (4)	20.0 (3)	26.9 (7)
Percent of Babies Having Had Checkup During First Six Months	100.0 (11)	92.9 (13)	96.0 (24)
Mean Number of Days in Hospital for Childbirth	4.3 (11)	5.7 (15)	5.1 (26)
Mean Weight of Infant, in Ounces	106.2 (11)	98.3 (14)	101.8 (25)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

TABLE B.15

COMPARISON OF BOSTON AND HARTFORD RESPONDENTS ON SELECTED PSYCHOLOGICAL VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group		
	Boston Experimental Group	Hartford Control Group	Both Sites
Mean Locus of Control Score	13.6 (35)[a]	13.2 (32)	13.4 (67)
Mean Self-Esteem Score	18.0 (35)	18.5 (34)	18.3 (69)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: Neither of the group comparisons is statistically significant at the .05 level, using a two-tailed t-test.

[a] The numbers in parentheses represent the number of respondents contributing to the calculation of the mean.

TABLE B.16

COMPARISON OF BOSTON AND HARTFORD RESPONDENTS ON SELECTED HOME ENVIRONMENT VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Boston Experimental Group		Hartford Control Group		Both Sites	
Percent With Both Parents Present During Childhood	27.8	(10)[a]	11.4	(4)	19.7	(14)
Percent With Mother Present at Baseline	38.2	(13)	41.2	(14)	39.7	(27)
Percent With Father Present at Baseline	5.9	(2)	8.8	(3)	7.4	(5)
Percent With Neither Parent Present	63.9	(23)	60.0	(21)	62.0	(44)
Mean Number of Household Members	5.0	(35)	5.1	(35)	5.0	(70)
Mean Number of Siblings	5.8	(36)	6.0	(34)	5.9	(70)
Percent With Mothers Who Gave Birth at 19 or Younger	91.7	(33)	71.4	(25)	81.7	(58)
Percent With Mothers With Less Than High School Diploma	72.2	(26)	81.8	(27)	76.8	(53)
Percent With One or More Household Members on AFDC	91.7	(33)	97.1	(33)	94.3	(66)
Percent With Household Income Equal to or Greater Than $400 per Month	36.0	(9)	57.6	(19)	48.3	(28)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: None of the group comparisons is statistically significant (using two-tailed chi-square tests for comparing percentages and two-tailed t-tests for comparing means) at or beyond the .05 level.

[a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

TABLE B.17

COMPARISON OF HARLEM AND BEDFORD-STUYVESANT RESPONDENTS ON SELECTED DEMOGRAPHIC VARIABLES AT BASELINE

	Percentage or Mean, by Group		
Variable	Harlem Experimental Group	Bedford-Stuyvesant Control Group	Both Sites
Mean Age	16.2 (56)[a]	16.1 (62)	16.1 (118)
Percent Black	98.2 (55)	96.8 (60)	97.5 (115)
Percent Hispanic	1.8 (1)	3.2 (2)	2.5 (3)
Percent Pregnant, not a Parent	50.0 (28)	71.0 (44)	61.0* (72)
Percent With More Than 1 Child	5.6 (3)	1.6 (1)	3.4 (4)
Percent Never Married	96.4 (54)	98.4 (61)	97.5 (115)
Mean Age at Marriage (Ever Marrieds)	16.0 (2)	-- --	16.0 (2)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

TABLE B.18

COMPARISON OF HARLEM AND BEDFORD-STUYVESANT RESPONDENTS ON SELECTED EDUCATIONAL VARIABLES AT BASELINE

	Percentage or Mean, by Group					
Variable	Harlem Experimental Group		Bedford-Stuyvesant Control Group		Both Sites	
Percent in School at Baseline	66.1	(37)[a]	79.0	(49)	72.9	(86)
Percent of Mothers in School at Baseline	57.1	(16)	66.7	(12)	60.9	(28)
Percent in Teen Parent School Program at Baseline	45.9	(17)	65.3	(32)	57.0	(49)
Percent Who Left School More Than 12 Months Before Baseline Interview	21.1	(4)	54.5	(6)	33.3	(10)
Percent of Dropouts Planning to Return	94.7	(18)	92.3	(12)	93.8	(30)
Mean Highest Grade Completed	8.7	(56)	8.5	(62)	8.6	(118)
Percent in School When Pregnancy Discovered	80.0	(44)	86.4	(51)	83.3	(95)
Percent Returned to School After Birth of Child	71.4	(20)	72.2	(13)	71.7	(33)
Percent in General School Program	66.1	(37)	58.1	(36)	61.9	(73)
Percent With Absentee Rate More Than Five Days per Month	16.1	(9)	16.1	(10)	16.1	(19)
Percent With Math Grade Below C	24.5	(13)	27.4	(17)	26.1	(30)
Percent With English Grade Below C	13.0	(7)	14.5	(9)	13.8	(16)
Percent Wanting More Than High School Diploma/GED	56.4	(31)	62.3	(38)	59.5	(69)
Percent Believing Achievement of Education Goals is Very Likely	63.3	(35)	49.2	(30)	56.0	(65)
Percent Mentioning Schooling as Goal for Self	17.9	(10)	19.4	(12)	18.6	(22)
Percent Mentioning Schooling as Goal for Child	76.8	(43)	85.5	(53)	81.4*	(96)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

TABLE B.19

COMPARISON OF HARLEM AND BEDFORD-STUYVESANT RESPONDENTS ON SELECTED EMPLOYMENT-RELATED VARIABLES AT BASELINE

	Percentage or Mean, by Group		
Variable	Harlem Experimental Group	Bedford-Stuyvesant Control Group	Both Sites
Percent Employed at Baseline	3.6 (2)[a]	4.8 (3)	4.2 (5)
Percent Never Having Worked (Excluding Babysitting)	35.7 (20)	38.7 (24)	37.3 (44)
Mean Number of Jobs Held (Including Babysitting)	1.1 (56)	1.1 (62)	1.1 (118)
Mean Number of Types of Training	2.3 (56)	3.7 (62)	3.0*** (118)
Mean Score, Career Maturity Scale	19.6 (55)	19.2 (62)	19.4 (117)
Mean Score, Employability Knowledge Test	12.1 (56)	11.6 (62)	11.9 (118)
Mean Score, Training Requirements Test	6.6 (56)	6.0 (62)	6.3 (118)
Mean Score, Attitudes Toward Non-Traditional Employment	13.9 (56)	13.4 (62)	13.6 (118)
Percent Mentioning Job as Goal for Self	55.4 (31)	54.8 (34)	55.1 (65)
Percent Mentioning Specific Job as Goal for Self	16.1 (9)	19.4 (12)	17.8 (21)
Percent Mentioning Job as Goal for Child	26.8 (15)	22.6 (14)	24.6 (29)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

TABLE B.20

COMPARISON OF HARLEM AND BEDFORD-STUYVESANT RESPONDENTS ON SELECTED FAMILY PLANNING/FERTILITY VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group		
	Harlem Experimental Group	Bedford-Stuyvesant Control Group	Both Sites
Mean Number of Pregnancies	1.3 (56)[a]	1.4 (62)	1.3 (118)
Percent Pregnant More Than One Time	23.2 (13)	35.5 (22)	29.6 (35)
Percent Ever Miscarried	1.8 (1)	14.5 (9)	8.5* (10)
Percent Ever Aborted	12.5 (7)	19.4 (12)	16.1 (19)
Percent Never Wanting Another Child	30.4 (17)	25.8 (16)	28.0 (33)
Percent in a Sexual Relationship at Baseline	38.2 (21)	51.6 (32)	45.3 (53)
Percent Ever Used Birth Control	53.6 (30)	51.6 (32)	52.5 (62)
Mean Number of Birth Control Methods Used	.8 (56)	.8 (62)	.8 (118)
Percent of Contraceptors Using the Pill, Last Intercourse	42.1 (8)	30.8 (4)	37.5 (12)
Mean Score, Birth Control Knowledge Test	10.4 (56)	9.9 (62)	10.1 (118)
Mean Score, Ease of Access to Birth Control Scale	11.4 (51)	12.4 (46)	11.9 (97)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

TABLE B.21

COMPARISON OF HARLEM AND BEDFORD-STUYVESANT RESPONDENTS ON SELECTED SERVICE-AND-SUPPORT-RELATED VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Harlem Experimental Group		Bedford-Stuyvesant Control Group		Both Sites	
Mean Number of Services Used	6.2	(56)[a]	8.2	(62)	7.2**	(118)
Mean Number of Services Needed	6.9	(56)	4.7	(62)	5.7***	(118)
Percent Having Been in Teen Parent Program	25.0	(14)	64.5	(40)	45.8***	(54)
Mean Number of Mentions in Support Network	2.7	(56)	3.5	(62)	3.1**	(118)
Percent With Close Friends Nearby	71.4	(40)	82.3	(51)	77.1	(91)
Percent Still in Contact With Baby's Father	75.0	(42)	83.9	(52)	79.7	(94)
Percent Using Their Mother for Child Care While in School	65.0	(13)	83.3	(10)	71.9	(23)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

TABLE B.22

COMPARISON OF HARLEM AND BEDFORD-STUYVESANT RESPONDENTS ON SELECTED HEALTH-RELATED VARIABLES AT BASELINE

	Percentage or Mean, by Group		
Variable	Harlem Experimental Group	Bedford-Stuyvesant Control Group	Both Sites
Percent Having Visited Doctor During First Three Months of Pregnancy	59.3 (16)[a]	61.1 (11)	60.0 (27)
Percent Having Visited Doctor More Than Five Times During Pregnancy	92.3 (24)	94.4 (17)	93.2 (41)
Percent With Problem This Pregnancy	33.3 (19)	33.3 (6)	33.3 (15)
Percent of Babies Leaving Hospital With Mother After Birth	77.8 (21)	72.2 (13)	75.6 (34)
Percent Having Visited Doctor Since Birth	100.0 (27)	83.3 (15)	93.3 (42)
Percent With Problem After Childbirth	14.8 (4)	27.8 (5)	20.0 (9)
Percent of Babies With Problem Since Birth	37.0 (10)	27.8 (5)	33.3 (15)
Percent of Babies Having Had Checkup During First Six Months	100.0 (27)	88.9 (16)	95.6 (43)
Mean Number of Days in Hospital For Childbirth	3.7 (27)	3.9 (18)	3.8 (45)
Mean Weight of Infant, in Ounces	108.6 (26)	109.3 (18)	108.9 (44)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: None of the group comparisons is statistically significant (using two-tailed chi-square tests for comparing percentages and two-tailed t-test for comparing means) at or beyond the .05 level.

[a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

TABLE B.23

COMPARISON OF HARLEM AND BEDFORD-STUYVESANT RESPONDENTS ON SELECTED PSYCHOLOGICAL VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Harlem Experimental Group		Bedford-Stuyvesant Control Group		Both Sites	
Mean Locus of Control Score	13.7	(56)[a]	13.5	(62)	13.6	(118)
Mean Self-Esteem Score	19.1	(56)	19.6	(62)	19.4	(118)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: Neither of the group comparisons is statistically significant at the .05 level, using a two-tailed t-test.

[a] The numbers in parentheses represent the number of respondents contributing to the calculation of the mean.

TABLE B.24

COMPARISON OF HARLEM AND BEDFORD-STUYVESANT RESPONDENTS ON SELECTED HOME ENVIRONMENT VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group		
	Harlem Experimental Group	Bedford-Stuyvesant Control Group	Both Sites
Percent With Both Parents Present During Childhood	21.4 (12)[a]	14.5 (9)	17.8 (21)
Percent With Mother Present at Baseline	74.1 (40)	75.8 (47)	75.0 (87)
Percent With Father Present at Baseline	24.1 (13)	11.3 (7)	17.2 (20)
Percent With Neither Parent Present	23.2 (13)	22.6 (14)	22.9 (27)
Mean Number Household Members	4.7 (56)	5.5 (62)	5.1 (118)
Mean Number of Siblings	4.2 (54)	4.7 (61)	4.5 (115)
Percent With Mothers Who Give Birth at 19 or Younger	57.1 (32)	67.7 (42)	62.7 (74)
Percent With Mothers With Less Than High School Diploma	35.7 (20)	48.4 (30)	42.4 * (50)
Percent With One or More Household Members on AFDC	80.4 (45)	72.6 (45)	76.3 (90)
Percent With Household Income Equal to or Greater Than $400 per Month	59.2 (29)	42.1 (24)	50.0 (53)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

TABLE B.25

COMPARISON OF DETROIT EAST AND DETROIT WEST RESPONDENTS ON SELECTED DEMOGRAPHIC VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group: Detroit East Experimental Group	Percentage or Mean, by Group: Detroit West Control Group	Percentage or Mean, by Group: Both Sites
Mean Age	16.0 (69)[a]	16.4 (76)	16.2 **(147)
Percent Black	100.0 (69)	100.0 (78)	100.0 (147)
Percent Hispanic	0 (0)	0 (0)	0 (0)
Percent Pregnant, not a Parent	33.3 (23)	14.1 (11)	23.1 * (34)
Percent With More Than 1 Child	7.4 (5)	11.5 (9)	9.6 * (14)
Percent Never Married	98.6 (68)	97.4 (76)	98.0 (144)
Mean Age at Marriage (Ever Marrieds)	15.0 (1)	16.0 (1)	15.5 (2)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.26

COMPARISON OF DETROIT EAST AND DETROIT WEST RESPONDENTS ON SELECTED EDUCATIONAL VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group		
	Detroit East Experimental Group	Detroit West Control Group	Both Sites
Percent in School at Baseline	57.4 (39)[a]	53.2 (41)	55.2 (80)
Percent of Mothers in School at Baseline	66.7 (30)	50.7 (34)	57.1 (64)
Percent in Teen Parent School Program at Baseline	15.0 (6)	17.5 (7)	16.3 (13)
Percent Who Left School More Than 12 Months Before Baseline Interview	15.5 (4)	32.4 (11)	25.0 (15)
Percent of Dropouts Planning to Return	100.0 (22)	94.4 (34)	96.6 (56)
Mean Highest Grade Completed	8.7 (61)	9.3 (76)	9.0 * (137)
Percent in School When Pregnancy Discovered	77.9 (53)	88.5 (69)	83.6 (122)
Percent Returned to School After Birth of Child	64.4 (29)	62.7 (42)	63.4 (71)
Percent in General School Program	53.6 (37)	56.4 (44)	55.1 (81)
Percent With Absentee Rate More Than Five Days per Month	35.3 (24)	24.4 (19)	29.5 (43)
Percent With Math Grade Below C	23.2 (16)	14.1 (11)	18.4 (27)
Percent With English Grade Below C	14.5 (10)	5.1 (4)	9.5 * (14)
Percent Wanting More Than High School Diploma/GED	56.1 (37)	63.6 (49)	60.1 (86)
Percent Believing Achievement of Education Goals is Very Likely	57.6 (38)	53.2 (41)	55.2 (79)
Percent Mentioning Schooling as Goal for Self	10.1 (7)	15.4 (12)	12.9 (19)
Percent Mentioning Schooling as Goal for Child	78.3 (54)	59.0 (46)	68.0 **(100)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.27

COMPARISON OF DETROIT EAST AND DETROIT WEST RESPONDENTS ON SELECTED EMPLOYMENT-RELATED VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Detroit East Experimental Group		Detroit West Control Group		Both Sites	
Percent Employed at Baseline	7.2	(5)[a]	5.1	(4)	6.1	(9)
Percent Never Having Worked (Excluding Babysitting)	39.1	(27)	44.9	(35)	42.2	(62)
Mean Number of Jobs Held (Including Babysitting	1.1	(69)	1.0	(78)	1.0	(147)
Mean Number of Types of Training	2.8	(69)	3.9	(78)	3.7 **	(147)
Mean Score, Career Maturity Scale	19.3	(66)	19.2	(77)	19.3	(143)
Mean Score, Employability Knowledge Test	10.3	(67)	10.6	(74)	10.4	(141)
Mean Score, Training Requirements Test	6.4	(65)	5.9	(69)	6.1	(134)
Mean Score, Attitudes Toward Non-Traditional Employment	14.4	(67)	13.6	(76)	14.0 **	(143)
Percent Mentioning Job as Goal for Self	42.0	(29)	24.4	(19)	32.7 *	(48)
Percent Mentioning Specific Job as Goal for Self	26.1	(18)	50.0	(39)	38.8 **	(57)
Percent Mentioning Job as Goal for Child	13.0	(9)	28.2	(22)	21.1 *	(31)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.28

COMPARISON OF DETROIT EAST AND DETROIT WEST RESPONDENTS ON SELECTED FAMILY PLANNING/FERTILITY VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Detroit East Experimental Group		Detroit West Control Group		Both Sites	
Mean Number of Pregnancies	1.3	(69)[a]	1.4	(78)	1.4	(147)
Percent Pregnant More Than One Time	29.0	(20)	33.3	(26)	31.3	(46)
Percent Ever Miscarried	7.2	(5)	7.7	(6)	7.5	(11)
Percent Ever Aborted	8.7	(6)	11.7	(9)	10.3	(15)
Percent Never Wanting Another Child	33.8	(23)	29.5	(23)	31.5	(46)
Percent in a Sexual Relationship at Baseline	58.8	(40)	39.7	(31)	48.6 *	(71)
Percent Ever Used Birth Control	73.9	(51)	75.6	(59)	74.8	(110)
Mean Number of Birth Control Methods Used	1.0	(69)	1.1	(78)	1.0	(147)
Percent of Contraceptors Using the Pill, Last Intercourse	53.1	(17)	56.5	(26)	55.1	(43)
Mean Score, Birth Control Knowledge Test	9.6	(68)	8.9	(78)	9.2	(146)
Mean Score, Ease of Access to Birth Control Scale	12.6	(50)	12.6	(40)	12.6	(90)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

TABLE B.29

COMPARISON OF DETROIT EAST AND DETROIT WEST RESPONDENTS ON SELECTED SERVICE-AND-SUPPORT-RELATED VARIABLES AT BASELINE

	Percentage or Mean, by Group					
Variable	Detroit East Experimental Group		Detroit West Control Group		Both Sites	
Mean Number of Services Used	6.3	(69)[a]	5.1	(78)	5.7*	(147)
Mean Number of Services Needed	7.8	(69)	5.6	(78)	6.6***	(147)
Percent Having Been in Teen Parent Program	20.3	(14)	34.6	(27)	27.9	(41)
Mean Number of Mentions in Support Network	3.3	(69)	2.9	(78)	3.1	(147)
Percent With Close Friends Nearby	72.5	(50)	85.9	(67)	79.6*	(117)
Percent Still in Contact With Baby's Father	71.0	(49)	67.9	(53)	69.4	(102)
Percent Using Their Mother for Child Care While in School	56.4	(22)	63.4	(26)	60.0	(48)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

TABLE B.30

COMPARISON OF DETROIT EAST AND DETROIT WEST RESPONDENTS ON SELECTED HEALTH-RELATED VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group		
	Detroit East Experimental Group	Detroit West Control Group	Both Sites
Percent Having Visited Doctor During First Three Months of Pregnancy	48.9 (22)[a]	61.2 (41)	56.3 (63)
Percent Having Visited Doctor More Than Five Times During Pregnancy	80.9 (34)	91.1 (61)	87.1 (95)
Percent With Problem This Pregnancy	40.0 (18)	28.4 (19)	33.0 (37)
Percent of Babies Leaving Hospital With Mother After Birth	72.7 (32)	77.6 (52)	75.7 (84)
Percent Having Visited Doctor Since Birth	97.7 (43)	89.6 (60)	92.8 (103)
Percent With Problem After Childbirth	20.9 (9)	17.9 (12)	19.1 (21)
Percent of Babies With Problem Since Birth	18.6 (8)	28.4 (19)	24.5 (27)
Percent of Babies Having Had Checkup During First Six Months	97.9 (43)	94.0 (63)	95.5 (106)
Mean Number of Days in Hospital For Childbirth	3.9 (44)	3.8 (67)	3.9 (111)
Mean Weight of Infant, in Ounces	104.6 (42)	102.8 (67)	103.5 (109)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: None of the group comparisons is statistically significant (using two-tailed chi-square tests for comparing percentages and two-tailed t-tests for comparing means) at or beyond the .05 level.

[a] The number in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

TABLE B.31

COMPARISON OF DETROIT EAST AND DETROIT WEST RESPONDENTS ON SELECTED PSYCHOLOGICAL VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group		
	Detroit East Experimental Group	Detroit West Control Group	Both Sites
Mean Locus of Control Score	13.8 (66)[a]	14.1 (77)	14.0 (143)
Mean Self-Esteem Score	19.2 (68)	20.3 (77)	19.8 * (145)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent the number of respondents contributing to the calculation of the mean.

*Two-tailed t-test is statistically significant at the .05 level.

TABLE B.32

COMPARISON OF DETROIT EAST AND DETROIT WEST RESPONDENTS ON SELECTED HOME ENVIRONMENT VARIABLES AT BASELINE

	Percentage or Mean, by Group					
Variable	Detroit East Experimental Group		Detroit West Control Group		Both Sites	
Percent With Both Parents Present During Childhood	8.7	(6)[a]	20.5	(16)	15.0	(22)
Percent With Mother Present at Baseline	79.4	(54)	79.5	(62)	79.5	(116)
Percent With Father Present at Baseline	16.2	(11)	14.1	(11)	15.1	(22)
Percent With Neither Parent Present	17.4	(12)	16.7	(13)	17.0	(25)
Mean Number Household Members	5.8	(69)	5.8	(78)	5.8	(147)
Mean Number of Siblings	5.9	(66)	4.4	(77)	5.1**	(143)
Percent With Mothers Who Gave Birth at 19 or Younger	71.0	(49)	59.0	(46)	64.6	(95)
Percent With Mothers With Less Than High School Diploma	36.2	(25)	26.9	(21)	31.3	(46)
Percent With One or More Household Members on AFDC	85.5	(59)	93.5	(72)	89.7	(131)
Percent With Household Income Equal to or Greater Than $400 per Month	38.9	(21)	38.1	(24)	38.5	(45)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.33

COMPARISON OF PHOENIX AND SAN ANTONIO RESPONDENTS ON SELECTED DEMOGRAPHIC VARIABLES AT BASELINE

	Percentage or Mean, by Group					
Variable	Phoenix Experimental Group		San Antonio Control Group		Both Sites	
Mean Age	15.7	(89)[a]	15.8	(89)	15.7	(178)
Percent Black	47.2	(42)	39.3	(35)	43.3	(77)
Percent Hispanic	40.5	(36)	57.3	(51)	48.9*	(87)
Percent Pregnant, not a Parent	56.2	(50)	61.8	(55)	59.0	(105)
Percent With More Than 1 Child	4.5	(4)	3.4	(3)	3.9	(7)
Percent Never Married	98.9	(88)	79.8	(71)	89.3***	(159)
Mean Age at Marriage (Ever Marrieds)	17.0	(1)	15.0	(16)	15.1	(17)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

TABLE B.34

COMPARISON OF PHOENIX AND SAN ANTONIO RESPONDENTS ON SELECTED EDUCATIONAL VARIABLES AT BASELINE

	Percentage or Mean, by Group					
Variable	Phoenix Experimental Group		San Antonio Control Group		Both Sites	
Percent in School at Baseline	44.8	(39)[a]	71.9	(64)	58.5***	(103)
Percent of Mothers in School at Baseline	33.3	(13)	73.5	(25)	52.1**	(38)
Percent in Teen Parent School Program at Baseline	51.3	(20)	17.2	(11)	30.1***	(31)
Percent Who Left School More Than 12 Months Before Baseline Interview	46.9	(23)	40.0	(10)	44.6	(33)
Percent of Dropouts Planning to Return	91.7	(44)	76.0	(19)	86.3	(63)
Mean Highest Grade Completed	8.6	(86)	8.2	(88)	8.4*	(174)
Percent in School When Pregnancy Discovered	53.7	(44)	71.3	(62)	62.7*	(106)
Percent Returned to School After Birth of Child	44.4	(16)	65.6	(21)	54.4	(37)
Percent in General School Program	79.8	(71)	60.7	(54)	70.2**	(125)
Percent With Absentee Rate More Than Five Days per Month	20.2	(18)	24.7	(22)	22.5	(40)
Percent With Math Grade Below C	14.9	(13)	7.9	(7)	11.4	(20)
Percent With English Grade Below C	9.2	(8)	10.1	(9)	9.7	(17)
Percent Wanting More Than High School Diploma/GED	42.9	(36)	19.3	(16)	31.1**	(52)
Percent Believing Achievement of Education Goals is Very Likely	50.0	(42)	55.4	(46)	52.7	(88)
Percent Mentioning Schooling as Goal for Self	15.7	(14)	10.1	(9)	12.9*	(23)
Percent Mentioning Schooling as Goal for Child	65.2	(58)	73.0	(65)	69.1	(123)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

***Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .001 level.

TABLE B.35

COMPARISON OF PHOENIX AND SAN ANTONIO RESPONDENTS ON SELECTED EMPLOYMENT-RELATED VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Phoenix Experimental Group		San Antonio Control Group		Both Sites	
Percent Employed at Baseline	9.0	(8)[a]	16.9	(15)	12.9	(23)
Percent Never Having Worked (Excluding Babysitting)	29.2	(26)	49.4	(44)	39.3*	(70)
Mean Number of Jobs Held (Including Babysitting)	1.3	(89)	1.1	(89)	1.2	(178)
Mean Number of Types of Training	2.9	(89)	1.8	(89)	2.3**	(178)
Mean Score, Career Maturity Scale	20.3	(88)	18.2	(88)	19.3**	(176)
Mean Score, Employability Knowledge Test	11.3	(89)	9.8	(88)	10.5**	(177)
Mean Score, Training Requirements Test	5.8	(85)	6.7	(88)	6.2	(173)
Mean Score, Attitudes Toward Non-Traditional Employment	14.6	(89)	14.1	(87)	14.3	(176)
Percent Mentioning Job as Goal for Self	43.8	(39)	44.9	(40)	44.4	(79)
Percent Mentioning Specific Job as Goal for Self	29.2	(26)	18.0	(16)	23.6	(42)
Percent Mentioning Job as Goal for Child	20.2	(18)	33.7	(30)	27.0	(48)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.36

COMPARISON OF PHOENIX AND SAN ANTONIO RESPONDENTS ON SELECTED FAMILY PLANNING/FERTILITY VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Phoenix Experimental Group		San Antonio Control Group		Both Sites	
Mean Number of Pregnancies	1.1	(89)[a]	1.2	(88)	1.2	(177)
Percent Pregnant More Than One Time	12.3	(11)	17.0	(15)	14.7	(26)
Percent Ever Miscarried	2.2	(2)	3.4	(3)	2.8	(5)
Percent Ever Aborted	2.2	(2)	5.7	(5)	4.0	(7)
Percent Never Wanting Another Child	25.3	(22)	22.5	(20)	23.9	(42)
Percent in a Sexual Relationship at Baseline	27.3	(24)	40.4	(36)	33.9	(60)
Percent Ever Used Birth Control	38.2	(34)	44.9	(40)	41.6	(74)
Mean Number of Birth Control Methods Used	.5	(89)	.5	(89)	.5	(178)
Percent of Contraceptors Using the Pill, Last Intercourse	65.2	(15)	66.7	(16)	66.0	(31)
Mean Score, Birth Control Knowledge Test	8.7	(89)	9.3	(89)	9.0	(178)
Mean Score, Ease of Access to Birth Control Scale	13.0	(59)	11.7	(56)	12.3**	(115)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.37

COMPARISON OF PHOENIX AND SAN ANTONIO RESPONDENTS ON SELECTED SERVICE-AND-SUPPORT-RELATED VARIABLES AT BASELINE

	Percentage or Mean, by Group					
Variable	Phoenix Experimental Group		San Antonio Control Group		Both Sites	
Mean Number of Services Used	6.0	(89)[a]	4.3	(89)	5.2**	(178)
Mean Number of Services Needed	5.5	(89)	6.7	(89)	6.1*	(178)
Percent Having Been in Teen Parent Program	16.3	(14)	21.3	(19)	18.9	(33)
Mean Number of Mentions in Support Network	3.4	(89)	3.0	(89)	3.2	(178)
Percent With Close Friends Nearby	74.2	(66)	59.6	(53)	66.9*	(119)
Percent Still in Contact With Baby's Father	66.3	(59)	58.4	(52)	62.4	(111)
Percent Using Their Mother for Child Care While in School	61.9	(13)	40.0	(10)	50.0	(23)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

**Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .01 level.

TABLE B.38

COMPARISON OF PHOENIX AND SAN ANTONIO RESPONDENTS ON SELECTED HEALTH-RELATED VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Phoenix Experimental Group		San Antonio Control Group		Both Sites	
Percent Having Visited Doctor During First Three Months of Pregnancy	41.0	(16)[a]	63.6	(21)	51.4	(37)
Percent Having Visited Doctor More Than Five Times During Pregnancy	87.2	(34)	78.8	(26)	83.3	(60)
Percent With Problem This Pregnancy	28.2	(11)	42.4	(14)	34.7	(25)
Percent of Babies Leaving Hospital With Mother After Birth	84.2	(32)	88.2	(30)	86.1	(62)
Percent Having Visited Doctor Since Birth	89.7	(35)	78.8	(26)	84.7	(61)
Percent With Problem After Childbirth	31.6	(12)	6.1	(2)	19.7*	(14)
Percent of Babies With Problem Since Birth	28.9	(11)	12.1	(4)	21.1	(15)
Percent of Babies Having Had Checkup During First Six Months	92.3	(36)	80.0	(28)	86.5	(64)
Mean Number of Days in Hospital for Childbirth	2.9	(37)	3.9	(32)	3.4	(69)
Mean Weight of Infant, in Ounces	102.1	(38)	107.6	(32)	104.6	(70)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a]The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

TABLE B.39

COMPARISON OF PHOENIX AND SAN ANTONIO RESPONDENTS ON SELECTED PSYCHOLOGICAL VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Phoenix Experimental Group		San Antonio Control Group		Both Sites	
Mean Locus of Control Score	14.3	(86)[a]	13.6	(87)	14.0*	(173)
Mean Self-Esteem Score	18.7	(87)	18.4	(88)	18.6	(175)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent the number of respondents contributing to the calculation of the mean.

*Two-tailed t-test is statistically significant at the .05 level.

TABLE B.40

COMPARISON OF PHOENIX AND SAN ANTONIO RESPONDENTS ON SELECTED HOME ENVIRONMENT VARIABLES AT BASELINE

Variable	Percentage or Mean, by Group					
	Phoenix Experimental Group		San Antonio Control Group		Both Sites	
Percent With Both Parents Present During Childhood	13.6	(12)[a]	28.1	(25)	20.9	(37)
Percent With Mother Present at Baseline	73.0	(65)	79.8	(71)	76.4	(136)
Percent With Father Present at Baseline	20.2	(18)	21.3	(19)	20.6	(37)
Percent With Neither Parent Present	24.7	(22)	19.1	(17)	21.9	(39)
Mean Number Household Members	6.2	(89)	6.0	(89)	6.1	(178)
Mean Number of Siblings	5.0	(88)	6.2	(86)	5.6*	(174)
Percent With Mothers Who Gave Birth at 19 or Younger	69.7	(62)	73.0	(65)	71.3	(127)
Percent With Mothers With Less Than High School Diploma	55.1	(49)	74.2	(66)	64.6*	(115)
Percent With One or More Household Members on AFDC	63.6	(56)	62.9	(56)	63.3	(112)
Percent With Household Income Equal to or Greater Than $400 per Month	51.2	(43)	57.0	(45)	54.0	(88)

SOURCE: Tabulations from AIR baseline interviews with Project Redirection participants and comparison group members.

NOTES: [a] The numbers in parentheses represent frequencies on which the statistic is based. For means, the number indicates the total number of respondents contributing to the calculation of the mean. For percentages, the number is the actual number giving the specified response.

*Two-tailed chi-square test (for percentage comparisons) or t-test (for mean comparisons) is statistically significant at the .05 level.

APPENDIX C

Bibliography

Adams, A.A. and Mangum, G.L. The lingering crisis of youth unemployment. Kalamazoo, Upjohn Institute for Employment Research, 1978.

Alan Guttmacher Institute (AGI). Teenage pregnancy: The problem that hasn't gone away. New York: AGI, 1981.

Alan Guttmacher Institute (AGI). Contraceptive services for adolescents: U.S., 1975. N.Y.: AGI, 1978.

Bacon, L.A. Early motherhood, accelerated role transition and social pathology. Social Forces, 1974, 52, 92-107.

Baldwin, W.H. Adolescent pregnancy and childbearing--growing concerns for Americans. Population Bulletin, 1977, 31(2) (Population Reference Bureau, Inc., Washington, D.C.)

Barnow, B.S., G.G. Cain and A.S. Goldberger. Issues in the analysis of selectivity bias. In E.W. Stromsdorfer and G. Farkas, (eds.) Evaluation Studies Review Annual. Beverly Hills, CA: Sage Publishers, 1980, 5.

Bonham, S. and Placek, P.J. The relationship of maternal health, infant health and sociodemographic factors to fertility. Public Health Reports, 1978, 93, 283-288.

Bowers, N. Young and marginal: An overview of youth unemployment. Monthly Labor Review, 1979 (Oct.), p. 3-18.

Broman, S.H. Outcome of adolescent pregnancy: A preliminary report from the Collaborative Perinatal Project of the National Institute of Neurological and Communicative Disorders and Stroke. Unpublished manuscript, 1978.

Cannon-Bonventre, K.B. and Kahn, J.R. The ecology of help-seeking behavior in pregnant adolescents. Cambridge, Ma.: American Institutes for Research, 1979.

Card, J.J. and Wise, L.L. Teenage mothers and teenage fathers: The impact of early childbearing on the parents' personal and professional lives. Family Planning Perspectives, 1978, 10(4), 199-205.

Carruth, B.R. Nutrition and teenage pregnancies. In Nutrition Update: Accent on Youth. Proceedings of a National Workshop sponsored by the American Home Economics Association, 1978.

Cartoof, V.G. Postpartum services for adolescent mothers. Child Welfare, 1978, 57(10), 660-666.

Cohen, J. and Cohen, P. Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences. New Jersey: Lawrence Erlbaum Associates, Inc., 1975.

Crites, J.O. Career Maturity Inventory: Administration and Use Manual. Monterey: McGraw Hill, 1978.

Coombs, J. and Cooley, W.W. Dropouts: In high school and after high school. American Educational Research Journal, 1968, 5, 343-358.

Foltz, A., Klerman, L.V. and Jekel, J.F. Pregnancy and special education: Who stays in school. American Journal of Public Health, 1972, 62, 1612-1619.

Forbush, J.B. Statement at the hearing before Subcommittee on Select Education of the Committee on Education and Labor, House of Representatives, on H.R. 12146, July 24, 1978.

Furstenberg, F.F., Jr., and Crawford, A.G. Family support: Helping teenage mothers to cope. Family Planning Perspectives, 1978, 10, 322-328.

Furstenberg, F.F., Jr., Unplanned Parenthood: The Social Consequences of Teenage Childbearing. New York: The Free Press, 1976.

Furstenberg, F.F., Jr., Masnick, G.S. and Ricketts, S.A. How can family planning programs delay repeat teenage pregnancies. Family Planning Perspectives, 1972, 4(3), 54-60.

Gabrielson, I.W., Klerman, L.V., Currie, J.B., Tyler, N.C. and Jekel, J.F. Suicide attempts in a population pregnant as teenagers. American Journal of Public Health, 1977, 60, 2289-2301.

Goldsmith, S., Gabrielson, M.O., Gabrielson, I., Mathews, V., and Potts, L. Teenagers, sex and contraception. Family Planning Perspectives, 1972 (Jan), 4(1), 32-38.

Grow, L.J. Early childrearing by young mothers: A research study. N.Y., Child Welfare League of America, 1979.

Heckman, J.J. Sample selection bias as specification error. Econometrica, 1979, 47, 153-162.

Henshaw, S., Forrest, J.D., Sullivan, E. and Tietze, C. Abortion in the U.S., 1978-1979. Family Planning Perspectives, 1981, 13, 6-12.

Howard, M. Young parent families. Unpublished manuscript, Clarkston, Georgia, 1978.

Jekel, J.F., Harrison, J.T., Bancroft, D.R.E., Tyler, N.C. and Klerman, L.V. A comparison of the health of index and subsequent babies born to school age mothers. American Journal of Public Health, 1975, 65(4), 370-374.

Jekel, J.F., Klerman, L.V. and Bancroft, D.R.E. Factors associated with rapid subsequent pregnancies among school-age mothers. American Journal of Public Health, 1973, 63(9), 769-773.

Jiobu, R.M. Earnings differentials between whites and ethnic minorities: the cases of Asian Americans, blacks, and Chicanos. Sociology and Social Research, 1976, 61(1), 24-38.

Johnston, J. and Bachman, J.G. The Transition from School to Work. Ann Arbor: The University of Michigan, Institute for Social Research, 1973.

Jones, A.E. and Placek, P.J. Teenage women in the U.S.A.: Sex, contraception, pregnancy, fertility and maternal and infant health. Teenage Pregnancy and Family Impact: New Perspectives on Policy. Preliminary report, Washington: Family Impact Seminar, 1979.

Kantner, J.F. and Zelnik, M. Sexual experience of young unmarried women in the United States. Family Planning Perspectives, 1972, 4, 9-18.

King, J.C. and Jacobson, H.N. Nutrition and pregnancy in adolescence. In Zackler, J. and Brandstadt, W. (eds.) The Teenager Pregnant Girl. Springfield, Ill.: Charles C. Thomas, 1975, 134-160.

Klerman, L.V. and Jekel, J.F. School-age mothers: Problems, programs and policy. Hamden, Conn.: Linnet Books, 1973.

Maddala, G.S. and Lee, L. Recursive models with qualitative endogenous variables. Annals of Economic and Social Measurement, 1976, 5, 525-545.

McLaughlin, S.D. Consequences of Adolescent Childbearing for the Mother's Occupational Attainment. Washington: U.S. Dept. of Commerce, 1977.

Menken, J. The health and demographic consequences of adolescent pregnancy and childbearing. Paper presented at the Conference on the Consequences of Adolescent Pregnancy and Childrearing, October, 1975.

Miller, W.B. Sexual and contraceptive behavior in young unmarried women. Primary Care, 1976(Sept), 3(3), 427-453.

Moore, K.A., Hafferth, S.L., Caldwell, S.B., and Waite, L.J. Teenage motherhood: Social and economic consequences. Washington, D.C.: The Urban Institute, 1979.

Moore, K.A. and Waite, L.J. Early childbearing and educational attainment. Family Planning Perspectives, 1977, 9, 220-226.

National Center for Education Statistics. Digest of Education Statistics 1980. Washington, D.C.: U.S. Government Printing Office, 1980a.

National Center for Education Statistics. Statistics of Public Elementary and Secondary Schools. Washington, D.C.: GPO, 1977.

National Center for Education Statistics. The Condition of Education for Hispanic Americans. Washington, D.C.: U.S. Government Printing Office, 1980b.

National Center for Health Statistics. Apgar Scores in the U.S., 1978. 30(1), May 1981.

National Center for Health Statistics. Final natality statistics, 1978. Monthly Vital Statistics Report, 29, No. 1, 1980.

National Center for Health Statistics. Vital statistics of the U.S., 1974. Washington, D.C.: Government Printing Office, 1976.

Nuttall, E.V., Nuttall, R.L., Polit, D.F., and Hunter, J. The effects of family size, birth order and sibling separation, and crowding on academic achievement of boys and girls. American Educational Research Journal, 1976, 13, 217-223.

Olsen, R.J. A least squares correction for selectivity bias. New Haven, CT: Yale University, Institution for Social and Policy Studies, 1979.

Polit, D., Kahn, J.R., and Enman, G. Contraceptive decision-making in adolescent couples. Washington: American Institutes for Research, 1981.

Presser, H.B. Social consequences of teenage childbearing. In Chilman, C. (ed.) Teenage childbearing: Recent research on the determinants and consequences. Washington, D.C.: Government Printing Office, 1978.

Presser, H.B. Early motherhood: Ignorance or bliss? Family Planning Perspectives, 1974, 6, 8-14.

Rehberg, R.A., and Westby, D.L. Parental encouragement, education and family size. Social Forces, 1967, 45, 362-374.

Schinke, S.P. Teenage pregnancy: The need for multiple casework services. Social Casework, 1978, July, 406-410.

Schultz, T.W. Investment in human capital: The role of education and of research. N.Y.: The Free Press, 1971.

Shah, F., Zelnik, M. and Kantner, J.F. Unprotected intercourse among unwed teenagers. Family Planning Perspectives, 1975, 7, 39-44.

Squires, G.D. Education, jobs, and inequality: Functional and conflict models of social stratification in the United States. Social Problems, 1977, 24 (April), 436-450.

Steinlauf, B. Problem-solving skills, locus of control, and contraceptive effectiveness of young women. Child Development, 1979, 50, 268-271.

Stepto, R.C., Keith, L. and Keith, D. Obstetrical and medical problems of teenage pregnancy. In Zackler, J. and Brandstadt, W. (eds.) The Teenage Pregnant Girl. Springfield, Ill.: Charles C. Thomas, 1975, 83-133.

Stine, O.C. et al. School leaving due to pregnancy in an urban adolescent population. American Journal of Public Health, 1964, 54, 1-12.

Tietze, C. Teenage pregnancies: Looking ahead to 1984. Family Planning Perspectives, 1978, 10, 205-214.

Trussell, T.J. Economic consequences of teenage childbearing. Paper presented at the Conference on the Consequences of Adolescent Pregnancy and Childbearing, October, 1975.

Turner, R.H. Some family determinants of ambition. Sociology and Social Research, 1962, 46, 397-411.

U.S. Department of Labor, School and Work Among Youth During the 1970s. Special labor Force Report 241. Washington, D.C.: Department of Labor, 1981.

U.S. Department of Labor. Profile of the Teenage Worker. Bulletin 2039. Washington, D.C.: U.S. Government Printing Office, 1980.

Urban and Rural Systems Associates. Improving Family Planning Services for Teenagers (submitted to DHEW, June 1976). San Francisco, CA, 1976.

Watts, M.E. Trends and developments in social services for teenage unmarried mothers. Clinical Obstetrics and Gynecology, 1971, 14, 457-465.

Wright, E.O. Race, class, and income inequality. American Journal of Sociology, 1978, 83(6), 1368-1397.

Zackler, J. and Brandstadt, W. (eds.) The Teenage Pregnant Girl. Springfield, Ill.: C.C. Thomas, 1975.

Zelnik, M. Sex education and knowledge of pregnancy risk among U.S. teenage women. Family Planning Perspectives, 1979 (Nov/Dec), 11(6), 355-357.

Zelnik, M. and Kantner, J.F. First pregnancies to women aged 15-19. 1976 and 1971. Family Planning Perspectives, 1978, 10(1), 11-20.

Zelnik, M. and Kantner, J.F. Sexual activity, contraceptive use and pregnancy among metropolitan-area teenagers: 1971-1979. Family Planning Perspectives, 1980, 12, 230-237.

Zitner, R. and Miller, S.H. Our Youngest Parents. New York: Child Welfare League, 1980.

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